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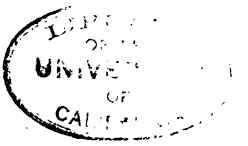

Nature's Decoration of an Old Pine Stump

THE WRITINGS OF
HENRY DAVID THOREAU

JOURNAL

EDITED BY BRADFORD TORREY

X

AUGUST 8, 1857–JUNE 29, 1858

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JOURNAL

VOLUME X

THE JOURNAL OF HENRY DAVID THOREAU

VOLUME X

I

AUGUST, 1857 (ÆT. 40)

Aug. 8. *Saturday.* Get home at 8.30 A. M.

I find that B. M. Watson sent me from Plymouth, July 20th, six glow-worms, of which two remain, the rest having escaped. He says they were found by his family on the evenings of the 18th and 19th of July. "They are very scarce, these being the only ones we have found as yet. They were mostly found on the way from the barn to James's cottage, under the wild cherry trees on the right hand, in the grass where it was very dry, and at considerable distance from each other. We have had no rain for a month."

Examining them by night, they are about three quarters of an inch long as they crawl. Looking down on *one*, it shows two bright dots near together on the head, and, along the body, nine transverse lines of light, succeeded by two more bright dots at the other extremity, wider apart than the first. There is also a bright dot on each side opposite the transverse lines. It is a greenish light, growing more green as the worm

is brought into more light. A slumbering, glowing, *inward* light, as if shining for itself inward as much as outward. The other worm, which was at first curled up still and emitted a duller light, was one and one twentieth inches in length and also showed two dots of light only on the forward segment. When stretched out, as you look down on them, they have a square-edged look, like a row of buns joined together. Such is the ocular illusion. But whether stretched out or curled up, they look like some kind of rare and precious gem, so regularly marked, far more beautiful than a uniform mass of light would be.

Examining by day, I found the smallest to be seven eighths to one inch long, and the body about one sixth of an inch wide and from one thirteenth to one twelfth of an inch deep, convex above, pointed at head, broader at tail; head about one twentieth of an inch wide. Yet these worms were more nearly linear, or of a uniform breadth (being perhaps broadest at forward extremity), than the *Lampyre* represented in my French book, which is much the broadest behind and has also two rows of dots down the back. They have six light-brown legs within a quarter of an inch of the forward extremity. The worm is composed of twelve segments or overlapping scales, like the abdominal plates of a snake, and has a slight elastic projection (?) beneath at tail. It has also six short antennæ-like projections from the head, the two outer on each side the longest, the two inner very short. The general color above was a pale brownish yellow or buff; the head small and dark-brown; the antennæ chestnut and white; white or

whitish on sides and beneath. You could see a faint dorsal line. They were so transparent that you could see the internal motions when looking down on them.

I kept them in a sod, supplying a fresh one each day. They were invariably found underneath it by day, next the floor, still and curled up in a ring, with the head within or covered by the tail. Were apt to be restless on being exposed to the light. One that got away in the yard was found again ten feet off and down cellar.

What kind are these?

In the account of the Glow-worm in Rees's Cyclopædia it is said, "The head is small, flat, hard, and black, and sharp towards the mouth; it has short antennæ, and six moderately long legs; the body is flat and is composed of twelve rings, whereas the body of the male consists only of five; it is of a dusky color, with a streak of white down the back."

Knapp, in "Journal of a Naturalist," speaks of "the luminous caudal spot" of the *Lampyris noctiluca*.[1]

Speaking with Dr. Reynolds about the phosphorescence which I saw in Maine, etc., etc., he said that he had seen the will-o'-the-wisp, a small blue flame, like burning alcohol, a few inches in diameter, over a bog, which moved when the bog was shaken.

Aug. 9. *Sunday.* I see the blackbirds flying in flocks (which did not when I went away July 20th) and hear the shrilling of my alder locust.

[1] *Vide* Sept. 16th for an account of another kind. *Vide* Jan. 15, 1858.

Aug. 10. *Monday.* P. M. — In Clintonia Swamp I see a remarkable yellow fungus about the base of some grass growing in a tuft. It is a jelly, shaped like a bodkin or a pumpkin's stigma, two inches long, investing the base of the grass blades, a quarter to a half inch thick, tapering to the grass each way and covered with a sort of moist meal. It was strong-scented and disagreeable.

Cat-tail commonly grows in the hollows and boggy places where peat has been dug.

How meanly and miserably we live for the most part! We escape fate continually by the skin of our teeth, as the saying is. We are practically desperate. But as every man, in respect to material wealth, aims to become independent or wealthy, so, in respect to our spirits and imagination, we should have some spare capital and superfluous vigor, have some margin and leeway in which to move. What kind of gift is life unless we have spirits to enjoy it and taste its true flavor? if, in respect to spirits, we are to be forever cramped and in debt? In our ordinary estate we have not, so to speak, quite enough air to breathe, and this poverty qualifies our piety; but we should have more than enough and breathe it carelessly. Poverty is the rule. We should first of all be full of vigor like a strong horse, and beside have the free and adventurous spirit of his driver; *i. e.*, we should have such a reserve of elasticity and strength that we may at any time be able to put ourselves at the top of our speed and go beyond our ordinary limits, just as the invalid hires a horse. Have the gods sent us into this world, — to this *muster*,

— to do chores, hold horses, and the like, and not given us any spending money?

The poor and sick man keeps a horse, often a hostler; but the well man is a horse to himself, is horsed on himself; he feels his own oats. Look at the other's shanks. How spindling! like the timber of his gig! First a sound and healthy life, and then spirits to live it with.

I hear the neighbors complain sometimes about the peddlers selling their help *false* jewelry, as if they themselves wore *true* jewelry; but if their help pay as much for it as they did for theirs, then it is just as *true* jewelry as theirs, just as becoming to them and no more; for unfortunately it is the cost of the article and not the merits of the wearer that is considered. The money is just as well spent, and perhaps better earned. I don't care how much false jewelry the peddlers sell, nor how many of the eggs which you steal are rotten. What, pray, is *true* jewelry? The hardened tear of a diseased clam, murdered in its old age. Is that fair play? If not, it is no jewel. The mistress wears this in her ear, while her help has one made of paste which you cannot tell from it. False jewelry! Do you know of any shop where *true* jewelry can be bought? I always look askance at a jeweller and wonder what *church* he can belong to.

I heard some ladies the other day laughing about some one of their *help* who had *helped* herself to a real hoop from off a hogshead for her gown. I laughed too, but which party do you think I laughed at? Is n't hogshead as good a word as crinoline?

Aug. 11. *Tuesday.* Red cohosh berries well ripe in front of Hunt's, perhaps a week or more, — a round, conical spike, two and a half inches long by one and three quarters, of about thirty cherry-red berries. The berries oblong, seven sixteenths of an inch by six sixteenths, with a seam on one side, on slender pedicels about five eighths of an inch long.

Aug. 13. J. Farmer saw some days ago a black-headed gull, between a kingfisher and common gull in size, sailing lightly on Bateman's Pond. It was very white beneath and bluish-white above. *Corallorhiza multiflora* and *Desmodium rotundifolium*, how long?

Aug. 15. *Lycopodium lucidulum*, how long?

Aug. 16. *Myriophyllum ambiguum*, apparently var. *limosum*, except that it is not nearly linear-leafed but pectinate, well out how long?

Aug. 20. *Thursday.* P. M. — To Hubbard's Close.

The hillside at Clintonia Swamp is in some parts quite shingled with the rattlesnake-plantain (*Goodyera pubescens*) leaves overlapping one another. The flower is now apparently in its prime. As I stand there, I hear a peculiar sound which I mistake for a woodpecker's tapping, but I soon see a cuckoo hopping near suspiciously or inquisitively, at length within twelve feet, from time to time uttering a hard, dry note, very much like a woodpecker tapping a dead dry tree rapidly,

its *full* clear white throat and breast toward me, and slowly lifting its tail from time to time. Though somewhat allied to that throttled note it makes by night, it was quite different from that.

I go along by the hillside footpath in the woods about Hubbard's Close. The *Goodyera repens* grows behind the spring where I used to sit, amid the dead pine leaves. Its leaves partly concealed in the grass. It is just done commonly.

Helianthus, *strumosus*-like, at the south end of Stow's *cold* pool; how long?

Aug. 22. *Saturday.* Channing has brought me from Plymouth and Watson *Drosera filiformis*, just out of bloom, from Great South Pond, *Solidago tenuifolia* in bloom, *Sabbatia chloroides*, and *Coreopsis rosea.*

Edward Hoar shows me *Lobelia Kalmii*, which he gathered in flower in Hopkinton about the 18th of July. (I found the same on the East Branch and the Penobscot); staphylea (in fruit) from Northampton, plucked within a week or so (Bigelow says it grows in Weston); also the leaves of a tree growing in Windsor, Vt., which they call the pepperidge, quite unlike our tupelo. Is it not the *Celtis crassifolia?* He says he found the *Uvularia perfoliata* on the Stow road, he thinks within Concord bounds.

Aug. 23. P. M. — To Conantum.

Hear the mole cricket nowadays. Collinsonia (very little left) not out.

Aug. 24. A. M. — Ride to Austin Bacon's, Natick.

On the left hand, just this side the centre of Wayland, I measure the largest, or northernmost, of two large elms standing in front of an old house. At four feet from the ground, where, looking from *one* side, is the smallest place between the ground and the branches, it is seventeen feet in circumference, but there is a bulge on the north side for five feet upward. At five feet it divides to two branches, and each of these soon divides again.

A. Bacon showed me a drawing apparatus which he said he invented, very simple and convenient, also microscopes and many glasses for them which he made. Showed me an exotic called "cypress," which he said had spread from the cemetery over the neighboring fields. Did not know what it was. Is it not *Euphorbia Cyparissias?* and does it not grow by the north roadside east of Jarvis's?[1]

I measured a scarlet oak northeast of his house, on land of the heirs of John Bacon, which at seven feet from the ground, or the smallest place below the branches, was ten feet eight inches in circumference, at one foot from ground sixteen and one fourth feet in circumference. It branched at twelve feet into three. Its trunk tapered or lessened very gradually and regularly from the ground to the smallest place, after the true Eddystone Lighthouse fashion. It has a large and handsome top, rather high than spreading (spreads about three and a half rods), but the branches often

[1] Also at J. Moore's front yard.

dead at the ends. This has grown considerably since Emerson measured; *vide* his account. Bacon says that E. pronounced it the largest oak in the State.

Showed us an elm on the north side of the same field, some ten feet in circumference, which he said was as large in 1714, his grandmother having remembered it nearly so long. There was a dead *Rhus radicans* on it two inches in diameter.

In the meadow south of this field, we looked for the *Drosera filiformis*, which formerly grew there, but could not find it. Got a specimen of very red clover, said to be from the field of Waterloo, in front of the house near the schoolhouse on the hill. Returned eastward over a bare hill with some walnuts on it, formerly called Pine Hill, from whence a very good view of the new town of Natick. On the northeast base of this hill Bacon pointed out to me what he called Indian corn-hills, in heavy, moist pasture ground where had been a pine wood. The hillocks were in irregular rows four feet apart which ran along the side of the hill, and were much larger than you would expect after this lapse of time. I was confident that if Indian, they could not be very old, perhaps not more than a century or so, for such could never have been made with the ancient Indian hoes, — clamshells, stones, or the like, — but with the aid of plows and white men's hoes. Also pointed out to me what he thought the home site of an Indian squaw marked by a buckthorn bush by the wall.

These hillocks were like tussocks with lichens thick on them, and B. thought that the rows were not running as a white man['s] with furrow.

We crossed the road which runs east and west, and, in the low ground on the south side, saw a white oak and a red maple, each forty or fifty feet high, which had fairly grown together for three or more feet upward from the ground. Also, near by, a large white ash which though healthy bore a mark or scar where a branch had been broken off and stripped down the trunk. B. said that one of his ancestors, perhaps his grandfather, before the Revolution, went to climb this tree, and reached up and took hold of this branch, which he stripped down, and this was the scar!

Under the dead bark of this tree saw several large crickets of a rare kind. They had a peculiar naked and tender look, with *branched* legs and a rounded incurved front.

Red cohosh grows along a wall in low ground close by. We ascended a ridge hill northeast of this, or east by south of Bacon's house, on the north end of which Squaw Poquet, as well as her father, who was a powwow, before her, lived. Bacon thought that powwows commonly withdrew at last to the northeast side of a hill and lived alone. We saw the remains of apple trees in the woods, which she had planted. B. thought apple trees did not now grow so large in New England as formerly, that they only grew to be one foot in diameter and then began to decay, whereas they formerly grew to be two or three and even sometimes four feet in diameter.

The *Corallorhiza multiflora* was common in these woods, and out.

The *Galium circæzans* leaves taste very much like

licorice and, according to B., produce a great flow of water, also make you perspire and are good for a cold.

We came down northward to the Boston and Worcester turnpike, by the side of which the *Malaxis liliifolia* grows, though we did not find it.

We waded into Coos Swamp on the south side the turnpike to find the ledum, but did not succeed. B. is sure it grows there. This is a large swamp with a small pond, or pond-hole, in the midst and the usual variety of shrubs. I noticed small spruces, high blueberry, the water andromeda, rhodora, *Vaccinium dumosum* (hairy) *ripe, Kalmia glauca, Decodon verticillatus*, etc. B. says that the arbor-vitæ grows indigenously in pretty large patches in Needham; that Cochituate Pond is only between three and four miles long, or five including the meadows that are flowed, yet it has been called even ten miles long.

B. gave me a stone with very pretty black markings like jungermannias, from a blasting on the aqueduct in Natick. Some refer it to electricity.

According to Guizot at the Montreal meeting the other day, Mt. Washington is 6285 feet above high-water mark at Portland.

Aug. 25. *Tuesday.* P. M. — To Hill and meadow.

Plucked a *Lilium Canadense* at three-ribbed golden-rod wall, six and eight twelfths feet high, with a pyramid of seed-vessels fourteen inches long by nine wide, the first an irregular or *diagonal* whorl of six, surmounted by a whorl of three. The upper two whorls of leaves are diagonal or *scattered*. It agrees with Gray's *L. Can-*

adense except in size, also with G.'s *superbum* except that the leaves of my specimen are rough on the edges and veins beneath (but I have not the flowers !). Bigelow says that the leaves of the *L. superbum* are twice as long as the internodes. These are only *as* long. This, as well as most that I saw on the Penobscot, is probably only a variety of the *L. Canadense.*

Aug. 26. *Wednesday.* P. M. — Up Assabet with Bradford and Hoar.

B. tells me he found the *Malaxis liliifolia* on Kineo. Saw there a tame gull as large as a hen, brown dove-color. A lumberer called some timber "frowy." B. has found *Cassia Chamæcrista* by the side of the back road between Lincoln and Waltham, about two miles this side of Waltham.

Aug. 27. *Thursday.* P. M. — To Conantum, high-blackberrying.

Detected a, to me, *new* kind of high blackberry on the edge of the cliff beyond Conant's wall on Lee's ground, — a long-peduncled (or pedicelled), *leafy-racemed* (somewhat panicled), *erect* blackberry. It has the aspect of *R. Canadensis* become erect, three or four feet high. The racemes (or panicles ?) leafy, with simple ovate and broad-lanceolate leaves; *loose, few flowered* (ten or twelve); peduncles (or pedicels) *one to two or more inches long*, often branched, with *bracts midway*, in fruit, at least, drooping. Perhaps the terminal flowers open first. Stem angular and furrowed much like that of *R. villosus*, leaf-stalks more prickly; leaves broader,

thinner, and less pointed, smooth above; beneath, as well as young branches, much smoother than *R. villosus;* lower leaves ternate and, if I remember, sometimes quinate. Berries of good size, globular, of very few, large grains, very glossy, of a lively flavor, when young of a peculiar light pink; sepals less recurved when ripe than those of *villosus*. It is apparently Bigelow's *R. frondosus* made a variety by Gray; *but see flowers.*

Aug. 28. *Polygonum Pennsylvanicum* by bank, how long?

R. W. E. says that he saw *Asclepias tuberosa* abundant and in bloom on Naushon last week; also a sassafras stump three feet across. The deer escape by running to the mainland, and in winter cross on the ice. The last winter they lost about one hundred and fifty sheep, whose remains have never been found. Perhaps they were carried off on the ice by the sea. Looking through a glass, E. saw vessels sailing near Martha's Vineyard with full sails, yet the water about them appeared perfectly smooth, and reflected the vessels. They thought this reflection a mirage, *i. e.* from a haze.

As we were riding by Deacon Farrar's lately, E. Hoar told me in answer to my questions, that both the young Mr. Farrars, who had now come to man's estate, were excellent young men, — their father, an old man of about seventy, once cut and corded seven cords of wood in one day, and still cut a double swath at haying time, and was a man of great probity, — and to show the unusual purity of one of them, at least, he said that, his

brother Frisbie, who had formerly lived there, inquiring what had become of a certain hired man whom he used to know, young Mr. Farrar told him that he was gone, "that the truth was he one day let drop a prophane word, and after that he thought that he could not have him about, and so he got rid of him." It was as if he had dropped some filthy thing on the premises, an intolerable nuisance, only to be abated by removing the source of it. I should like to hear as good news of the New England farmers generally. It to some extent accounts for the vigor of the father and the successful farming of the sons.

I read the other day in the *Tribune* that a man apparently about seventy, and smart at that, went to the police in New York and asked for a lodging, having been left by the cars or steamboat when on his way to Connecticut. When they asked his age, native place, etc., he said his name was McDonald; he was born in Scotland in 1745, came to Plymouth, Mass., in 1760, was in some battles in the Revolution, in which he lost an eye; had a son eighty-odd years old, etc.; but, seeing a reporter taking notes, he was silent. Since then I heard that an old man named McDonald, one hundred and twelve years old, had the day before passed through Concord and was walking to Lexington, and I said at once he must be a humbug. When I went to the post-office to-night (August 28), G. Brooks asked me if I saw him and said that he heard that he told a correct story, except he said that he remembered Braddock's defeat! He had noticed that Dr. Heywood's old house, the tavern, was gone since he was here in the Revolution.

Just then Davis, the postmaster, asked us to look at a letter he had received. It was from a Dr. Curtis of Newton asking if this McDonald belonged about Concord as he said, and saying that his story appeared to be a correct one. Davis had never heard of him, and, as we presumed him to be a humbug, we advised Davis to write accordingly. But I afterward remembered reading nearly a year ago of a man of this name and age in St. Louis, who said he had married a wife in Concord before the Revolution, and then began to think that his story might be all true. So it seems that a veteran of a hundred and twelve, after an absence of eighty-seven years, may come back to the town where he married his wife in order to hunt up his relatives, and not only have no success, but be pronounced a humbug!![1]

Aug. 29. *Saturday.* P. M. — To Owl-Nest Swamp with C.

Gerardia tenuifolia, a new plant to Concord, apparently in prime, at entrance to Owl-Nest Path and generally in that neighborhood. Also on Conantum height above orchard, two or three days later. This species grows on dry ground, or higher than the *purpurea*, and is more delicate. Got some ferns in the swamp and a small utricularia not in bloom, apparently different from that of Pleasant Meadow (*vide*

[1] [These last two paragraphs appear in the manuscript journal under date of July 28, having been written at the time when he was writing up his recent Maine excursion. The date in the second paragraph indicates this as their proper place.]

August 18). The proserpinaca leaves are very interesting in the water, so finely cut. *Polygonum arifolium* in bloom how long?

We waded amid the proserpinaca south of the wall and stood on a small bed of sphagnum, three or four feet in diameter, which rose above the surface. Some kind of water rat had its nest or retreat in this wet sphagnum, and being disturbed, swam off to the shore from under us. He was perhaps half as large again as a mole, or nearly, and somewhat grayish. The large and broad-leafed sium which grows [here] is, judging from its seed, the same with the common. I find the calla going to seed, but still the seed is green. That large, coarse, flag-like reed is apparently *Carex comosa;* now gone to seed, though only one is found with seed still on it, under water.

The Indian Rock, further west, is upright, or overhanging two feet, and a dozen feet high. Against this the Indians camped. It has many very large specimens of the *Umbilicaria Dillenii,* some six or eight inches in diameter, dripping with moisture to-day, like leather aprons hanging to the side of the rock, olive-green (this moist day), curled under on the edges and showing the upper side; but when dry they curl upward and show the crocky under sides. Near by, north, is a rocky ridge, on the east slope of which the *Corallorhiza multiflora* is very abundant. Call that Corallorhiza Rocks.

Aug. 30. *Sunday.* P. M. — To Conantum.

Small botrychium, not long. The flower of *Cicuta maculata* smells like the leaves of the golden senecio.

Collinsonia has been out apparently three or four days. *Polygonum tenue* at Bittern Cliff, how long?

Aug. 31. *Monday.* P. M. — To Flint's Pond.

An abundance of fine high blackberries behind Britton's old camp on the Lincoln road, now in their prime there, which have been overlooked. Is it not our richest fruit?

Our first muskmelon to-day.

Lycopodium complanatum out, how long? I have seen for several days amphicarpæa with perfectly white flowers, in dense clusters.

At Flint's Pond I waded along the edge eight or ten rods to the wharf rock, carrying my shoes and stockings. Was surprised to see on the bottom and washing up on to the shore many little farinaceous roots or tubers like very small potatoes, in strings. I saw these at every step for more than a dozen rods and thought they must have been washed up from deeper waters. Examining very closely, I traced one long string through the sandy soil to the root of a ground-nut which grew on the edge of the bank, and afterwards saw many more, whose tuberous roots lying in the sand were washed bare, the pond being unusually high. I could have gathered quarts of them. I picked up one string floating loose, about eighteen inches long, with as usual a little greenness and vitality at one end, which had thirteen nuts on it about the size of a walnut or smaller. I never saw so many ground-nuts before, and this made on me the impression of an unusual fertility.

Bathing there, I see a small potamogeton, very com-

mon there, wholly immersed and without floating leaves, which rises erect from the sandy bottom in curving rows four or five feet long. On digging I find it to rise from a subterranean shoot which is larger than any part above ground. It may be one I have, whose floating leaves the high water has destroyed or prevented. The leaves of it have small bits of that fresh-water sponge, so strong-scented, on them.

II

SEPTEMBER, 1857

(ÆT. 40)

Sept. 1. *Tuesday.* P. M. — To Fair Haven Pond by boat.

Landing at Bittern Cliff, I see that fine purple grass; how long? At Baker's shore, I at length distinguished fairly the *Sagittaria simplex*, which I have known so long, the small one with simple leaves. But this year there are very few of them, being nearly drowned out by the high water.

On the west side of Fair Haven Pond, an abundance of the *Utricularia purpurea* and of the whorled, etc., whose finely dissected leaves are a rich sight in the water. Again I observe that the heart-leaf, as it decays, preserves fresh and green for some time within, or in its centre, a finely dissected green leaf, suggesting that it has passed through this stage in its development. Immersed leaves often present this form, but [it] seems that even emersed ones remember it. High blackberries are still in their prime on Lee's Cliff, but huckleberries soft and wormy, many of them.

I have finally settled for myself the question of the two varieties of *Polygonum amphibium*. I think there are not even two varieties. As formerly, I observe again to-day a *Polygonum amphibium* extending from the shore six feet into the water. In the water, of course,

the stem is prostrate, rank, and has something serpent-like in its aspect. From the shore end rise erect flowering branches whose leaves are more or less roughish and prickly on the midrib beneath. On the water end the leaves are long-petioled, *heart-shaped*, and perfectly smooth. *Vide* a specimen pressed. I have seen this same plant growing erect in the *driest* soil, by the roadside, and it ranges from this quite into the water.

Sept. 2. Wednesday. P. M. — To Yellow Birches.

Measured the thorn at Yellow Birch Swamp. At one foot from ground it is a foot and ten inches in circumference. The first branch is at two feet seven inches. The tree spreads about eighteen feet. The height is about seventeen feet.

A yellow birch some rods north was, at three feet from ground, four feet plus in circumference. A second, northeast of it, was, at four feet, five feet five inches in circumference. It branched at eight feet, the branches extending north two and a third rods, but south only one and a half. Was some fifty or sixty feet high. The third, or largest, yellow birch, at the cellar, was, at three feet from the ground on the inside or at the ground on the outside, just below the branches, ten feet nine inches in circumference. It divides to three branches at ground on the upper side, and these almost immediately to three more, so low and horizontal that you can easily step into it. It extends two rods east and one west, the ends of the branches coming down to height of head all round, nearly. It is about

two thirds as high as wide, or thirty-three feet high. Looking from the west, of an irregular diamond shape resting on the ground. The roots inclose some cellar stones. All these birches were measured at the smallest place between the ground and branches. Large yellow birches branch low and form a dense broom-like head of many long tapering branches.

In the botrychium swamp, where the fever-bush is the prevailing underwood, I see a *Rhus radicans* running up a buttonwood which is some forty feet high. It first makes a complete circle about it horizontally at the ground, then goes winding up it in a serpentine manner on the southwest (?) side, thirty feet at least, or as far as I could see, beginning to put out a few twigs at seven or eight feet. It is a vine one and a half and two inches wide, somewhat flattened, clinging close and flat to the tree by innumerable brown fibres which invest itself and adhere to the bark on each side in a thick web. You can hardly tell if it is alive or dead with[out] looking upward. Remembering that it was poisonous to some to handle, it had altogether a venomous look. It made me think of a venomous beast of prey which had sprung upon the tree and had it in its clutches, as the glutton is said to cling to the deer while it sucks its blood. It had fastened on it, as a leopard or panther on a deer and there was no escape. It was not married to the buttonwood, as the vine to the poplar. I saw a still larger one the other day in Natick on an elm.

Some bass trees blossomed sparingly after all, for I see some fruit.

Sept. 3. P. M. — Rode to Prospect Hill, Waltham. The *Polygonum Pennsylvanicum* there. One *Chimaphila maculata* on the hill. Tufts of *Woodsia Ilvensis*. *Hedyotis longifolia* still flowering commonly, near the top, in a *thin* wood. *Gerardia tenuifolia* by the road in Lincoln, and a slate-colored snowbird back.

Sept. 4. P. M. — To Bateman's Pond.

Rudbeckia laciniata (?) by Dodge's Brook, north of the road; how long? *Cornus sericea* berries begin to ripen. The leaves of the *light-colored* spruce in the spruce swamp are erect like the white!

Penetrating through the thicket of that swamp, I see a great many very straight and slender upright shoots, the slenderest and tallest that I ever saw. They are the *Prinos lævigatus*. I cut one and brought it home in a ring around my neck, — it was flexible enough for that, — and found it to be seven and a half feet long and quite straight, eleven fortieths of an inch in diameter at the ground and three fortieths [in] diameter at the other end, only the last foot or so of this year's growth. It had a light-grayish bark, rough-dotted. Generally they were five or six feet high and not bigger than a pipe-stem anywhere. This comes of its growing in dense dark swamps, where it makes a good part of the underwood.

At the cleft rock by the hill just west of this swamp, — call it Cornel Rock, — I found apparently *Aspidium cristatum* (?), *q. v.* That is an interesting spot. There is the handsomest and most perfect *Cornus circinata* there that I know, now apparently its fruit

in prime, hardly light-blue but delicate bluish-white. It is the richest-looking of the cornels, with its large round leaf and showy cymes; a slender bush seven or eight feet high. There is quite a collection of rare plants there, — petty morel, *Thalictrum dioicum*, witch-hazel, etc., *Rhus radicans*, maple-leaved viburnum, polypody, *Polygonum dumetorum*, anychia. There was a strawberry vine falling over the perpendicular face of the rock, — or more than perpendicular, — which hung down dangling in the air five feet, not yet reaching the bottom, with leaves at intervals of fifteen inches. Various rocks scattered about in these woods rising just to the surface with smooth rounded surfaces, showing a fine stratification *on its edges*.

The sides of Cornus florida Ravine at Bateman's Pond are a good place for ferns. There is a *Woodsia Ilvensis*, a new one to Concord. Petty morel in the ravine, and large cardinal-flowers.

I see prenanthes radical leaf turned pale-yellow. Arum berries ripe.

Already, long before sunset, I feel the dew falling in that cold calla swamp.

Sept. 5. *Saturday.* I now see those brown shaving-like stipules [1] of the white pine leaves, which are falling, *i. e.* the stipules, and caught in cobwebs.

River falls suddenly, having been *high* all summer.

Sept. 6. *Sunday.* P. M. — To Assabet, west bank. Turned off south at Derby's Bridge and walked

[1] ? Sheaths.

through a long field, half meadow, half upland. Soapwort gentian, out not long, and dwarf cornel again. There is a handsome crescent-shaped meadow on this side, opposite Harrington's. A good-sized black oak in the pasture by the road half-way between the schoolhouse and Brown's. Walked under Brown's hemlocks by the railroad. How commonly hemlocks grow on the north slope of a hill near its base, with only bare reddened ground beneath! This bareness probably is not due to any peculiar quality in the hemlocks, for I observe that it is the same under pitch and white pines when equally thick. I suspect that it is owing more to the shade than to the fallen leaves. I see one of those peculiarly green locusts with long and slender legs on a grass stem, which are often concealed by their color. What green, herbaceous, graminivorous ideas he must have! I wish that my thoughts were as *seasonable* as his! Some haws *begin* to be ripe.

We go along under the hill and woods north of railroad, west of Lord's land, about to the west of the swamp and to the Indian ditch. I see in the swamp black chokeberries twelve feet high at least and in fruit.

C. says that they use high blueberry wood for tholepins on the Plymouth ponds.

I observe to-day, away at the south end of our dry garden, a moist and handsome *Rana halecina*. It is the only frog that I ever see in such localities. He is quite a traveller. A very cool day.

Sept. 7. Monday. P. M. — To Dodge Brook Wood. It occurred to me some weeks ago that the river-banks

were not *quite* perfect. It is too late then, when the mikania is in bloom, because the pads are so much eaten then. Our first slight frost in some places this morning. Northwest wind to-day and cool weather; such weather as we have not had for a long time, a new experience, which arouses a corresponding breeze in us. *Rhus venenata* berries are whitening. Its leaves appear very fresh, of a rich, dark, damp green, and very little eaten by insects.

Go round by the north side of Farmer's (?) Wood, turn southeast into the shut-in field, and thence to Spencer Brook, a place for hawks. *Bidens chrysanthemoides* there; how long? There are three or four larch trees near the east edge of the meadows here. One measures two feet and seven inches in circumference at six feet from ground; begins to branch there, but is dead up to ten feet from ground, where its diameter is apparently about twelve feet; and from this it tapers regularly to the top, which is about forty-five feet from the ground, forming a regular, sharp pyramid, yet quite airy and thin, so that you could see a hawk through it pretty well. These are young and healthy trees.

Measured that large tupelo behind Merriam's, which now is covered with green fruit, and its leaves begin to redden. It is about thirty feet high, with a round head and equally broad near the ground. At one foot from the ground, it is four and a third feet in circumference; at seven feet, three and a third in circumference. The principal [branches] diverge at about fifteen or sixteen feet from the ground and tend upward; the lower

ones are small and partly dead. The lowest, at about thirteen or fourteen feet from the ground, are three or four inches in diameter, and first grow out horizontally about six feet, then, making an abrupt angle, straggle downward nearly to the ground, fifteen feet from the tree. This leaves the tree remarkably open in the middle.

Returning to my boat, at the white maple, I see a small round flock of birds, perhaps blackbirds, dart through the air, as thick as a charge of shot, — now comparatively thin, with regular intervals of sky between them, like the holes in the strainer of a watering-pot, now dense and dark, as if closing up their ranks when they roll over one another and stoop downward.

Sept. 9. *Wednesday.* P. M. — To the Hill for white pine cones.

Very few trees have any. I can only manage small ones, fifteen or twenty feet high, climbing till I can reach the dangling green pickle-like fruit in my right hand, while I hold to the main stem with my left. The cones are now all flowing with pitch, and my hands are soon so covered with it that I cannot easily cast down the cones where I would, they stick to my hands so. I cannot touch the basket, but carry it on my arm; nor can I pick up my coat, which I have taken off, unless with my teeth, or else I kick it up and catch it on my arm. Thus I go from tree to tree, from time to time rubbing my hands in brooks and mud-holes, in the hope of finding something that will remove pitch

like grease, but in vain. It is the stickiest work I ever did. I do not see how the squirrels that gnaw them off and then open them scale by scale keep their paws and whiskers clean. They must know of, or possess, some remedy for pitch that we know nothing of. How fast I could collect cones, if I could only contract with a family of squirrels to cut them off for me! Some are already brown and dry and partly open, but these commonly have hollow seeds and are worm-eaten. The cones collected in my chamber have a strong spirituous scent, almost rummy, or like a molasses hogshead, agreeable to some. They are far more effectually protected than the chestnut by its bur.

Going into the low sprout-land north of the Sam Wheeler orchard, where is a potato-field in new ground, I see the effects of the frost of the last two or three nights. The ferns and tall erechthites showing its pappus are drooping and blackened or imbrowned on all sides, also *Eupatorium pubescens*, tender young *Rhus glabra*, etc., and the air is full of the rank, sour smell of freshly withering vegetation. It is a great change produced in one frosty night. What a sudden period put to the reign of summer!

On my way home, caught one of those little red-bellied snakes in the road, where it was rather sluggish, as usual. Saw another in the road a week or two ago. The whole length was eight inches; tail alone, one and four fifths. The plates about one hundred and nineteen; scales forty and upward. It was a dark ash-color above, with darker longitudinal lines, light brick-red beneath. There were three triangular buff

spots just behind the head, one above and one each side. It is apparently *Coluber amœnus*, and perhaps this is the same with Storer's *occipito-maculatus*.

C. brings me a small *red* hypopytis. It has a faint sweet, earthy, perhaps checkerberry, scent, like that sweet mildewy fragrance of the earth in spring.

Aunts have just had their house shingled, and amid the rubbish I see sheets of the paper birch bark, which have lain on the roof so long. The common use of this formerly shows that it must have been abundant here.

Sept. 10. *Thursday.* P. M. — To Cardinal Ditch and Peter's.

Cardinal-flower, nearly done. Beach plum, almost ripe. Squash vines on the Great Fields, *generally* killed and blackened by frost (though not so much in our garden), revealing the yellow fruit, perhaps prematurely. Standing by Peter's well, the white maples by the bank of the river a mile off now give a rosaceous tinge to the edge of the meadow. I see lambkill ready to bloom a second time. Saw it out on the 20th ; how long ?

Sept. 11. *Friday.* Up railroad and to Clamshell.

Solidago puberula apparently in prime, with the *S. stricta*, near gerardia oaks. Red choke-berry ripe; how long ? On the east edge of Dennis Swamp, where I saw the strange warbler once.

To my surprise I find, by the black oaks at the sand-hole east of Clamshell, the *Solidago rigida*, apparently

in prime or a little past. The heads and rays were so large I thought at first it must be a hieracium. The rays are from ten to fourteen, and three to three and a half fortieths of an inch wide. The middle leaves are *clasping* by a heart-shaped base. The heads are seven fortieths of an inch wide and seventeen fortieths long, in recurved panicles, — *these*. Eaton says truly, "Scales of the calyx round-obtuse, nerved, membranous at the edges."

My old *S. stricta* (early form) must be *S. arguta* var. *juncea*. It is now done.

Sept. 12. *Saturday*. P. M. — To Owl Swamp (Farmer's).

In an open part of the swamp, started a very large wood frog, which gave one leap and squatted still. I put down my finger, and, though it shrank a little at first, it permitted me to stroke it as long as I pleased. Having passed, it occurred to me to return and cultivate its acquaintance. To my surprise, it allowed me to slide my hand under it and lift it up, while it squatted cold and moist on the middle of my palm, panting naturally. I brought it close to my eye and examined it. It was very beautiful seen thus nearly, not the dull dead-leaf color which I had imagined, but its back was like burnished bronze armor defined by a varied line on each side, where, as it seemed, the plates of armor united. It had four or five dusky bars which matched exactly when the legs were folded, showing that the painter applied his brush to the animal when in that position, and reddish-orange soles to its delicate feet.

There was a conspicuous dark-brown patch along the side of the head, whose upper edge passed directly through the eye horizontally, just above its centre, so that the pupil and all below were dark and the upper portion of the iris golden. I have since taken up another in the same way.[1]

Round-leaved cornel berries nearly all fallen.

Crossing east through the spruce swamp, I think that I saw a female redstart.

What is that running herbaceous vine which forms a dense green mat a rod across at the bottom of the swamp northwest of Corallorhiza Rock?[2] It is of the same form, stem and leaves, with the more brown hairy and woolly linnæa. It also grows in the swamp by the beech trees in Lincoln.

Sept. 13. *Sunday. Nabalus Fraseri*, top of Cliffs, — a new plant, — yet in *prime* and not long out. The nabalus family generally, apparently now in prime.

Sept. 16. A. M. — To Great Yellow Birch, with the Watsons.

Solidago latifolia in prime at Botrychium Swamp. Barberries very handsome now. See boys gathering them in good season. Some fever-bush berries already ripe. Watson has brought me apparently *Artemisia vulgaris*, growing naturally close to Austin's house in Lincoln; hardly in bloom.

Walked through that beautiful soft white pine grove

[1] Indeed they can generally be treated so. Some are reddish, as burnished copper.

[2] It is chrysosplenium.

on the west of the road in John Flint's pasture. These trees are large, but there is ample space between them, so that the ground is left grassy. Great pines two or more feet in diameter branch sometimes within two feet of the ground on each side, sending out large horizontal branches on which you can sit. Like great harps on which the wind makes music. There is no finer tree. The different stages of its soft glaucous foliage completely concealing the trunk and branches are separated by dark horizontal lines of shadow, the flakes of pine foliage, like a pile of light fleeces.

I see green and closed cones beneath, which the squirrels have thrown down. On the trees many are already open. Say within a week have begun. In one small wood, all the white pine cones are on the ground, generally unopened, evidently freshly thrown down by the squirrels, and then the greater part have already been stripped. They begin at the base of the cone, as with the pitch pine. It is evident that they have just been very busy throwing down the white pine cones in all woods. Perhaps they have stored up the seeds separately. This they can do before chestnut burs open.

Watson gave me three glow-worms which he found by the roadside in Lincoln last night. They exhibit a greenish light, only under the caudal extremity, and intermittingly, or at will. As often as I touch one in a dark morning, it stretches and shows its light for a moment, only under the last segment. An average one is five eighths of an inch long, exclusive of the head, when still; four fifths of an inch, or more, with the head, when moving; one fourth of an inch wide, broad-

est forward; and from one tenth to one eighth inch deep, nearly (at middle). They have six brown legs within about one fourth of an inch of the forward extremity. This worm is apparently composed of twelve scale-like segments, including the narrow terminal one or tail, and not including the head, which at will is drawn under the foremost scale or segment like a turtle's. (I do not remember if the other species concealed its head thus, completely.) Looking down on it, I do not see *distinctly* more than two antennæ, one on each side, whitish at base, dark-brown at tip, and apparently about the same length with the longest of the other species. The general color above is black, or say a very dark brown or blackish; the head the same. On each side two *faint* rows of light-colored dots. The first segment is *broadly* conical, and much the largest; the others very narrow in proportion to their breadth transversely, and successively narrower, slightly recurved at tip and bristle-pointed and also curved upward at the thin outer edge, while the rounded dorsal ridge is slightly elevated above this. Beneath, dirty white with two rows of black spots on each side.

They always get under the sod by day and bury themselves. They are not often much curled up, never in a ring, nor nearly so much as the other kind. They are much more restless when disturbed, both by day and night, than the others. They are a much coarser insect than the other and approach more nearly to the form of a sow-bug. I kept them more than a week.

Vide back, August 8th.

Sept. 17. *Thursday.* I go to Fair Haven Hill, looking at the varieties of nabalus, which have a singular prominence now in all woods and roadsides. The lower leaves are very much eaten by insects. How perfectly each plant has its turn! — as if the seasons revolved for it alone. Two months ago it would have taken a sharp eye to have detected this plant. One of those great puffballs, three inches in diameter, ripe.

Sept. 18. *Friday.* P. M. — Round Walden with C. We find the water cold for bathing. Coming out on to the Lincoln road at Bartlett's path, we found an abundance of haws by the roadside, just fit to eat, quite an agreeable subacid fruit. We were glad to see anything that could be eaten so abundant. They must be a supply depended on by some creatures. These bushes bear a profusion of fruit, rather crimson than scarlet when ripe.

I hear that "Uncle Ned" of the Island told of walking along the shore of a pond where the "shells" of the mosquitoes were washed up in winrows.

As I was going through the Cut, on my way, I saw what I thought a rare high-colored flower in the sun on the sandy bank. It was a *Trifolium arvense* whose narrow leaves were turned a bright crimson, enhanced by the sun shining through it and lighting it up. Going along the low path under Bartlett's Cliff, the *Aster lævis* flowers, when seen toward the sun, are very handsome, having a purple or lilac tint.

We started a pack of grouse, which went off with a whir like cannon-balls. C. said he did not see but they

were round still and preserved the same relation to the wind and other elements that they held twenty years ago. I suggested that they were birds of the season.

Coming home through the street in a thunder-shower at ten o'clock this night, it was exceedingly dark. I met two persons within a mile, and they were obliged to call out from a rod distant lest we should run against each other. When the lightning lit up the street, almost as plain as day, I saw that it was the same *green* light that the glow-worm emits. Has the moisture something to do with it in both cases?

Sept. 19. *Saturday.* Still somewhat rainy, — since last evening.

Solidago arguta variety done, say a week or more.

Sept. 20. *Sunday.* Another mizzling day.

P. M. — To beach plums behind A. Clarke's.

We walked in some trodden path on account of the wet grass and leaves, but the fine grass overhanging paths, weighed down with dewy rain, wet our feet nevertheless. We cannot afford to omit seeing the beaded grass and wetting our feet. This is our first fall rain, and makes a dividing line between the summer and fall. Yet there has been no drought the past summer. Vegetation is unusually fresh. Methinks the grass in some shorn meadows is even greener than in the spring. You are soon wet through by the underwood if you enter the woods, — ferns, aralia, huckleberries, etc. Went through the lower side of the wood west of Peter's.

The *early* decaying and variegated spotted leaves of the *Aralia nudicaulis*, which spread out flat and of uniform height some eighteen (?) inches above the forest floor, are very noticeable and interesting in our woods in early autumn, now and for some time. For more than a month it has been changing. The outlines of trees are more conspicuous and interesting such a day as this, being seen distinctly against the near misty background, — distinct and dark.

The branches of the alternate cornel are spreading and flat, somewhat cyme-like, as its fruit. Beach plums are now perfectly ripe and unexpectedly good, as good as an average cultivated plum. I get a handful, dark-purple with a bloom, as big as a good-sized grape and but little more oblong, about three quarters of an inch broad and a very little longer. I got a handkerchief full of elder-berries, though I am rather late about it, for the birds appear to have greatly thinned the cymes.

A great many small red maples in Beck Stow's Swamp are turned quite crimson, when all the trees around are still perfectly green. It looks like a gala day there.

A pitch pine and birch wood is rapidly springing up between the Beck Stow Wood and the soft white pine grove. It is now just high and thick enough to be noticed as a young wood-lot, if not mowed down.[1]

Sept. 21. *Monday.* P. M. — To Corallorhiza Rock and Tobacco-pipe Wood, northeast of Spruce Swamp.

Peaches are now in their prime. Came through that

[1] Cut down in '59.

thick white pine wood on the east of the spruce swamp.

This is a very dense white pine grove, consisting of tall and slender trees which have been thinned, yet they are on an average only from three to six feet asunder. Perhaps half have been cut. It is a characteristic white pine grove, and I have seen many such. The trees are some ten inches in diameter, larger or smaller, and about fifty feet high. They are bare for thirty-five or forty feet up, — which is equal to at least twenty-five years of their growth, or with only a few dead twigs high up. Their green crowded tops are mere oval spear-heads in shape and almost in proportionate size, four to eight feet wide, — not enough, you would think, to keep the tree alive, still less to draw it upward. In a dark day the wood is not only thick but dark with the boles of the trees. Under this dense shade, the red-carpeted ground is almost bare of vegetation and is dark at noon. There grow *Goodyera pubescens* and *repens*, *Corallorhiza multiflora* (going to seed), white cohosh *berries*, *Pyrola secunda*, and, on the low west side and also the east side, an abundance of tobacco-pipe, which has begun to turn black at the tip of the petals and leaves.

The *Solidago cæsia* is very common and fresh in copses, perhaps the prevailing solidago now in woods. *Rudbeckia laciniata* done, probably some time. The warmth of the sun is just beginning to be appreciated again on the advent of cooler days.

Measured the large white willow north the road near Hildreth's. At a foot and a half from the ground

it is fourteen feet in circumference; at five feet, the smallest place, it is twelve feet in circumference. It was once still larger, for it has lost large branches.[1]

Sept. 23. *Wednesday.* P. M. — To chestnut oaks.

Varieties of nabalus grow along the Walden road in the woods; also, still more abundant, by the Flint's Pond road in the woods. I observe in these places only the *N. alba* and *Fraseri;* but these are not well distinguished; they seem to be often alike in the color of the pappus. Some are very tall and slender, and the largest I saw was an *N. Fraseri!* One *N. alba* had a panicle three feet long!

The Ripley beeches have been cut. I can't find them. There is one large one, apparently on Baker's land, about two feet in diameter near the ground, but fruit hollow. I see yellow pine-sap, in the woods just east of where the beeches used to stand, just done, but the red variety is very common and quite fresh generally there.[2]

Sept. 24. *Thursday.* A. M. — Up the *Assabet.*

The river is considerably raised and also muddied by the recent rains.

I saw a red squirrel run along the bank under the hemlocks with a nut in its mouth. He stopped near the foot of a hemlock, and, hastily pawing a hole with his fore feet, dropped the nut, covered it up, and retreated part way up the trunk of the tree, all in a few moments. I approached the shore to examine the

[1] Cut down in '59.

[2] Oct. 14, 1858.

deposit, and he, descending betrayed no little anxiety for his treasure and made two or three motions to recover the nut before he retreated. Digging there, I found two pignuts joined together, with their green shells on, buried about an inch and a half in the soil, under the red hemlock leaves.[1] This, then, is the way forests are planted. This nut must have been brought twenty rods at least and was buried at just the right depth. If the squirrel is killed, or neglects its deposit, a hickory springs up.[2]

P. M. — I walked to that very dense and handsome white pine grove east of Beck Stow's Swamp. It is about fifteen rods square, the trees large, ten to twenty inches in diameter. It is separated by a wall from another pine wood with a few oaks in it on the south-east, and about thirty rods north and west are other pine and oak woods. Standing on the edge of the wood and looking through it,—for it is quite level and free from underwood, *mostly* bare, red-carpeted ground,—you would have said that there was not a hardwood tree in it, young or old, though I afterward found on one edge a middling-sized sassafras, a birch, a small tupelo, and two little scarlet oaks, but, what was more interesting, I found, on looking closely over its floor, that, alternating with thin ferns and small blueberry bushes, there was, as often as every five feet, a little oak, three to twelve inches high, and in one place I found a green acorn dropped by the base of a tree. I

[1] *Vide* Patent Office Reports, 1856, p. 59.

[2] These nuts were there Oct. 8th. Gone Nov. 21st.

was surprised, I confess, to find my own theory so perfectly proved. These oaks, apparently, find such a locality unfavorable to their growth as long as the pines stand. I saw that some had been browsed by the cows which resort to the wood for shade. As an evidence that hardwood trees would not flourish under those circumstances, I found a red maple twenty-five feet high recently prostrated, as if by the wind, but still covered with green leaves, the only maple in the wood, and also two birches decaying in the same position.[1] The ground was completely strewn with white pine cones, apparently thrown down by the squirrels, still generally green and closed, but many stripped of scales, about the base of almost every pine, sometimes all of them. Now and for a week a good time to collect them. You can hardly enter such a wood but you will hear a red squirrel chiding you from his concealment in some pine-top. It is the sound most native to the locality.

Minott tells of their finding near a bushel of chestnuts in a rock, when blasting for the mill brook, at that ditch near Flint's Pond. He said it was a gray squirrel's depot.

I find the *Lycopodium dendroideum*, not quite out, just northwest of this pine grove, in the grass. It is not the variety *obscurum*, which grows at Trillium Wood, is more upright-branched and branches round.

Sept. 25. Friday. P. M. — To tupelo on Daniel B. Clark's land.

[1] [*Excursions*, pp. 190–192; Riv. 233–236.]

Stopping in my boat under the Hemlocks, I hear singular bird-like chirruping from two red squirrels. One sits high on a hemlock bough with a nut in its paws. A squirrel seems always to have a nut at hand ready to twirl in its paws. Suddenly he dodges behind the trunk of the tree, and I hear some birds in the maples across the river utter a peculiar note of alarm of the same character with the hen's (I think they were robins), and see them seeking a covert. Looking round, I see a marsh hawk beating the bushes on that side.

You notice now the dark-blue dome of the soapwort gentian in cool and shady places under the bank.

Pushing by Carter's pasture, I see, deep under water covered by the rise of the river, the cooper's poles a-soak, held down by planks and stones.

Fasten to the white maple and go inland. Wherever you may land, it would be strange if there were not some alder clump at hand to hide your oars in till your return.

The red maple has fairly begun to blush in some places by the river. I see one, by the canal behind Barrett's mill, all aglow against the sun. These first trees that change are most interesting, since they are seen against others still freshly green, — such brilliant red on green. I go half a mile out of my way to examine such a red banner. A single tree becomes the crowning beauty of some meadowy vale and attracts the attention of the traveller from afar. At the eleventh hour of the year, some tree which has stood mute and inglorious in some distant vale thus proclaims its character as effectually as [if] it stood by the highway-side,

and it leads our thoughts away from the dusty road into those brave solitudes which it inhabits. The whole tree, thus ripening in advance of its fellows, attains a singular preëminence. I am thrilled at the sight of it, bearing aloft its scarlet standard for its regiment of green-clad foresters around. The forest is the more spirited.[1]

I remember that brakes had begun to decay as much as six weeks ago. Dogwood (*Rhus venenata*) is yet but pale-scarlet or yellowish. The *R. glabra* is more generally turned.

Stopped at Barrett's mill. He had a buttonwood log to saw. In an old grist-mill the festoons of cobwebs revealed by the white dust on them are an ornament. Looking over the shoulder of the miller, I drew his attention to a mouse running up a brace. "Oh, yes," said he, "we have plenty of them. Many are brought to the mill in barrels of corn, and when the barrel is placed on the platform of the hopper they scamper away."

As I came round the island, I took notice of that little ash tree on the opposite shore. It has been cut or broken off about two feet from the ground, and seven small branches have shot up from its circumference, all together forming a perfectly regular oval head about twenty-five feet high and very beautiful. With what harmony they work and carry out the idea of the tree, one twig not straying farther on this side than its fellow on that! That the tree thus has its idea to be lived up to, and, as it were, fills an invisible mould in the

[1] [*Excursions*, pp. 260, 261; Riv. 318–320.]

air, is the more evident, because if you should cut away one or all but one, the remaining branch or branches would still in time form a head in the main similar to this.

Brought home my first boat-load of wood.

Sept. 26. Saturday. A. M. — Apparently *Hypericum prolificum* in Monroe's garden, still out.

The season is waning. A wasp just looked in upon me. A very warm day for the season.

P. M. — Up river to Clamshell.

These are warm, serene, bright autumn afternoons. I see far off the various-colored gowns of cranberry-pickers against the green of the meadow. The river stands a little way over the grass again, and the summer is over. The pickerel-weed is brown, and I see musquash-houses. *Solidago rigida*, just done, within a rod southwest of the oak. I see a large black cricket on the river, a rod from shore, and a fish is leaping at it. As long as the fish leaps, it is motionless as if dead; but as soon as it feels my paddle under it, it is lively enough. I sit on Clamshell bank and look over the meadows. Hundreds of crickets have fallen into a sandy gully and now are incessantly striving to creep or leap up again over the sliding sand. This their business this September afternoon. I watch a marsh hawk circling low along the edge of the meadow, looking for a frog, and now at last it alights to rest on a tussock.

Coming home, the sun is intolerably warm on my left cheek. I perceive it is because the heat of the re-

flected sun, which is as bright as the real one, is added to that of the real one, for when I cover the reflection with my hand the heat is less intense.

That cricket seemed to know that if he lay quietly *spread out* on the surface, either the fishes would not suspect him to be an insect, or if they tried to swallow him would not be able to.

What blundering fellows these crickets are, both large and small! They were not only tumbling into the river all along shore, but into this sandy gully, to escape from which is a Sisyphus labor. I have not sat there many minutes watching two foraging crickets which have decided to climb up two tall and slender weeds almost bare of branches, as a man shins up a liberty-pole sometimes, when I find that one has climbed to the summit of my knee. They are incessantly running about on the sunny bank. Their still larger cousins, the mole crickets, are creaking loudly and incessantly all along the shore. Others have eaten themselves cavernous apartments, sitting-room and pantry at once, in windfall apples.

Speaking to Rice of that cricket's escape, he said that a snake [*sic*] in like manner would puff itself up when a snake was about to swallow him, making right up to him. He once, with several others, saw a small striped snake swim across a piece of water about half a rod wide to a half-grown bullfrog which sat on the opposite shore, and attempt to seize him, but he found that he had caught a Tartar, for the bullfrog, seeing him coming, was not afraid of him, but at once seized his head in his mouth and closed his jaws

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upon it, and he thus held the snake a considerable while before the latter was able by struggling to get away.

When that cricket felt my oar, he leaped without the least hesitation or perhaps consideration, trusting to fall in a pleasanter place. He was evidently trusting to drift against some weed which would afford him a *point d'appui.*

Sept. 27. I am surprised to find that, yesterday having been a sudden very warm day, the peaches have mellowed suddenly and wilted, and I find many more fallen than even after previous rains. Better if ripened more gradually.

How out of all proportion to the *value* of an idea, when you come to one, — in Hindoo literature, for instance, — is the historical fact about it, — the when, where, etc., it was actually expressed, and what precisely it might signify to a sect of worshippers! Anything that is called history of India — or of the world — is impertinent beside any real poetry or inspired thought which is dateless.

P. M. — To Lee's Cliff by land.

Small red maples in low ground have fairly begun to burn for a week. It varies from scarlet to crimson. It looks like training-day in the meadows and swamps. They have run up their colors. A small red maple has grown, perchance, far away on some moist hillside, a mile from any road, unobserved. It has faithfully discharged the duties of a maple there, all winter and summer, neglected none of its economies, added

to its stature in the virtue which belongs to a maple, by a steady growth all summer, and is nearer heaven than in the spring, never having gone gadding abroad; and now, in this month of September, when men are turned travellers, hastening to the seaside, or the mountains, or the lakes, — in this month of travelling, — this modest maple, having ripened its seeds, still without budging an inch, travels on its reputation, runs up its scarlet flag on that hillside, to show that it has finished its summer work before all other trees, and withdraws from the contest. Thus that modest worth which no scrutiny could have detected when it was most industrious, is, by the very tint of its maturity, by its very blushes, revealed at last to the most careless and distant observer. It rejoices in its existence; its reflections are unalloyed. It is the day of thanksgiving with it. At last, its labors for the year being consummated and every leaf ripened to its full, it flashes out conspicuous to the eye of the most casual observer, with all the virtue and beauty of a maple, — *Acer rubrum*. In its hue is no regret nor pining. Its leaves have been asking their parent from time to time in a whisper, "When shall we redden?" It has faithfully husbanded its sap, and builded without babbling nearer and nearer to heaven. Long since it committed its seeds to the winds and has the satisfaction of knowing perhaps that a thousand little well-behaved and promising maples of its stock are already established in business somewhere. It deserves well of Mapledom. It has afforded a shelter to the wandering bird.[1] Its

[1] [*Excursions*, pp. 260, 261; Riv. 319, 320.]

autumnal tint shows how it has spent its summer; it is the hue of its virtue.

These burning bushes stand thus along the edge of the meadows, and I distinguish them afar upon all the hillsides, here and there.[1] Her *virtues* are as scarlet.[2]

The large common ferns (either cinnamon or interrupted) are yellowish, and also many as rich a deep brown now as ever. White birches have fairly begun to yellow, and blackberry vines here and there in sunny places look like a streak of blood on the grass. Bass, too, fairly begun to yellow. *Solidago nemoralis* nearly done. I sit on the hillside at Miles Swamp. A woodbine investing the leading stem of an elm in the swamp quite to its top is seen as an erect slender red column through the thin and yellowing foliage of the elm, — a very pretty effect. I see some small woodbine leaves in the shade of a delicate cherry-color, bordering on pink.

As I sit there I see the shadow of a hawk flying above and behind me. I think I see more hawks nowadays. Perhaps it is both because the young are grown and their food, the small birds, are flying in flocks and are abundant. I need only sit still a few minutes on any spot which overlooks the river meadows, before I see some black circling mote beating along, circling along the meadow's edge, now lost for a moment as it turns edgewise in a peculiar light, now reappearing further or nearer.

[1] [*Excursions*, p. 259; Riv. 317.]

[2] [*Excursions*, p. 261; Riv. 320.]

Witch-hazel two thirds yellowed.

Huckleberries are still abundant and quite plump on Conantum, though they have a somewhat dried taste.

It is most natural, *i. e.* most in accordance with the natural phenomena, to suppose that North America was discovered from the northern part of the Eastern Continent, for a study of the range of plants, birds, and quadrupeds points to a connection on that side. Many birds are common to the northern parts of both continents. Even the passenger pigeon has flown across there. And some European plants have been detected on the extreme northeastern coast and islands, which do not extend inland. Men in their migrations obey in the main the same law.

Sept. 28. I planted six seeds sent from the Patent Office and labelled, I think, "*Poitrine jaune grosse*" (large yellow pumpkin (or squash?)). Two came up, and one bore a squash which weighs 123½ lbs. the other bore four,

1	weighing	72¾
2d	"	54
3d	"	37¾
4th	"	21¾
		309¾

Who would have believed that there was 310 pounds of *poitrine jaune grosse* in that corner of our garden? Yet that little seed found it. Other seeds would find something else every year for successive ages, until the crop more than filled our whole garden; which suggests that the various fruits are the product of the

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same elements differently combined, and those elements are in continual revolution around the globe. This *poitrine* found here the air of France, and measurably its soil too.[1]

Looking down from Nawshawtuct this afternoon, the white maples on the Assabet and below have a singular light glaucous look, almost hoary, as if curled and showing the under sides of the leaves, and they contrast with the fresh green pines and hemlocks. The swamp white oaks present some of the same crisped whitish appearance.

I see that E. Wood has sent a couple of Irishmen, with axe and bush-whack, to cut off the natural hedges of sumach, Roxbury waxwork, grapes, etc., which have sprung up by the walls on this hill farm, in order that his cows may get a little more green. And they have cut down two or three of the very rare celtis trees, not found anywhere else in town. The Lord deliver us from these vandalic proprietors! The botanist and lover of nature has, perchance, discovered some rare tree which has sprung up by a farmer's wall-side to adorn and bless it, sole representative of its kind in these parts. Strangers send for a seed or a sprig from a distance, but, walking there again, he finds that the farmer has sent a raw Irishman, a hireling just arrived on these shores, who was never there before, — and, we trust, will never be let loose there again, — who knows not whether he is hacking at the upas tree or the Tree of Knowledge, with axe and stub-scythe to exterminate it, and he will know it no

[1] [*Excursions*, p. 203; Riv. 249.]

more forever. What is trespassing? This Hessian, the day after he was landed, was whirled twenty miles into the interior to do this deed of vandalism on our favorite hedge. I would as soon admit a living mud turtle into my herbarium. If some are prosecuted for abusing children, others deserve to be prosecuted for maltreating the face of nature committed to their care.

Had one of those sudden cool gusts, which filled the air with dust from the road, shook the houses, and caused the elms to labor and drop many leaves, early in afternoon. No such gust since spring.

Sept. 29. All sorts of men come to Cattle-Show. I see one with a blue hat.

I hear that some have gathered fringed gentian. Pines have begun to be parti-colored with yellow leaves.

Sept. 30. Ground white with frost this morning.

P. M. — To Walden.

Young oaks generally reddening, etc., etc. *Rhus Toxicodendron* turned yellow and red, handsomely dotted with brown.

At Wheeler's Wood by railroad, heard a cat owl hooting at 3.30 P. M., which was repeatedly answered by another some forty rods off.

Talked with Minott, who was sitting, as usual, in his wood-shed. His hen and chickens, finding it cold these nights on the trees behind the house, had begun last night to roost in the shed, and one by one walked or hopped up a ladder within a foot of his shoulder to the loft above. He sits there so much like a fixture

that they do not regard him. It has got to be so cool, then, that tender chickens seek a shelter at night; but I saw the hens at Clark's (the R. Brown house) were still going to roost in the apple trees. M. asks the peddlers if they've got anything that'll cure the rheumatism, and often buys a wash of them.

I was telling him how some crows two or three weeks ago came flying with a scolding caw toward me as I stood on "Cornel Rock," and alighted within fifty feet on a dead tree above my head, unusually bold. Then away go all but one, perchance, to a tall pine in the swamp, twenty rods off; anon he follows. Again they go quite out of sight amid the tree-tops, leaving one behind. This one, at last, quite at his leisure, flaps away cawing, knowing well where to find his mates, though you might think he must winter alone.

Minott said that as he was going over to Lincoln one day thirty or forty years ago, taking his way through Ebby Hubbard's woods, he heard a great flock of crows cawing over his head, and one alighted just within gunshot. He raised his little gun marked London, which he knew would fetch down anything that was within gunshot, and down came the crow; but he was not killed, only so filled with shot that he could not fly. As he was going by John Wyman's at the pond, with the live crow in his hand, Wyman asked him what he was going to do with that crow, to which he answered, "Nothing in particular,"—he happened to alight within gunshot, and so he shot him. Wyman said that he'd like to have him. "What do you want to do with him?" asked M. "If you'll give

him to me, I'll tell you," said the other. To which Minott said, "You may have him and welcome." Wyman then proceeded to inform him that the crows had eaten a great space in Josh Jones the blacksmith's corn-field, which Minott had passed just below the almshouse, and that Jones had told him that if he could kill a crow in his corn-field he would give him half a bushel of rye. He could guess what he wanted the crow for. So Wyman took the crow and the next time he went into town he tossed him over the wall into the corn-field and then shot him, and, carrying the dead crow to Jones, he got his half-bushel of rye.

[Here, and at several following points, matter relative to the recent Maine excursion is omitted as having been already used in "The Maine Woods."]

The mist and mizzling rain there[1] was like the sparkling dust of amethysts.

The Watsons tell me that Uncle Ned uses the expression "a glade" for the sheen of the moon on the water, which is, I see, according to Bailey, being from κλάδος, a branch. Helps thinks "a glade" such a path through a forest as an army would cut with a sword. . . .

What poor crack-brains we are! easily upset and unable to take care of ourselves! If there were a precipice at our doors, some would be found jumping off to-day for fear that, if they survived, they might jump off to-morrow. . . .

Consider what actual phenomena await us. To say nothing of life, which may be rare and difficult to detect, and death, which is startling enough, we cannot begin

[1] [At Mt. Kineo, Moosehead Lake.]

to conceive of anything so surprising and thrilling but that something more surprising may be actually presented to us.[1] . . .

According to the Upanishads, "As water, when rained down on elevated ground, runs scattered off in the valleys, so ever runs after difference a person who beholds attributes different (from the soul)."

"As pure water, which is thrown down on pure ground, remains alike, so also, O Gautama, is the soul of the thinker who knows."

Minott says he is seventy-five years old.

Minott said he had seen a couple of pigeons go over at last, as he sat in his shed. At first he thought they were doves, but he soon saw that they were pigeons, they flew so straight and fast.

He says that that tall clock which still ticks in the corner belonged to old John Beatton, who died before he was born; thought it was two hundred years old!! Some of the rest of the furniture came from the same source. His gun marked London was one that Beatton sent to England for, for a young man that lived with him. I read on John Beatton's tombstone near the powder-house that he died in 1776, aged seventy-four.

[1] [Apropos of the phosphorescent wood of *Maine Woods*, pp. 198–201 (Riv. 245–248).]

III

OCTOBER, 1857

(ÆT. 40)

Oct. 1. P. M. — To second stone bridge and down Assabet home.

The ash trees are a dull red, and some quite mulberry-color. Methinks it has to do with the smart frost of yesterday morning; *i. e.*, that after the maples have fairly begun, the *young* red oaks, ash trees, etc., begin with the first smart frost. The pines now half turned yellow, the needles of this year are so much the greener by contrast. The arbor-vitæ changes with them so completely that it looks as if the lower parts were dead. All very much exposed button-bushes are brown and sere; so their yellowish season does not amount to much away from the river.[1] . . .

It seemed to me that it was no compliment to their god to suppose that he would not let them go to Ktaadn without so much ado.[2] They'd better have put their shoulders to the wheel and stumped it along at a good round pace. . . .

I boiled some rice at the carry, for our dinner, in cooking which I consider myself adept, having had a good deal of experience in it. P. said that he sometimes used it, but boiled it till it all fell apart, and,

[1] *Vide* [4] pages forward [Oct. 4].

[2] [See *Maine Woods*, pp. 214, 215; Riv. 265.]

finding this mess unexpectedly soft though quickly prepared, he asked if it had not been cooked before.

Washing the dishes, especially the greasy ones, is the most irksome duty of the camp, and it reminded me of that sacred band in Fourier's scheme, who took upon themselves the most disagreeable services. The consequence is that they do not often get washed.

Oct. 2. P. M. — To Hubbard's Close and Swamp. *Veronica scutellaria* still. Sitting on a rock east of Trillium Woods, I perceive that, generally speaking, it is only the edge or *pediment* of the woods that shows the bright autumnal tints yet (while the superstructure is green), the birches, very young oaks and hickories, huckleberry bushes, blackberries, etc., etc., that stand around the edges, though here and there some taller maple flames upward amid the masses of green, or some other riper and mellower tree.

The chief incidents in Minott's life must be more distinct and interesting to him now than immediately after they occurred, for he has recalled and related them so often that they are stereotyped in his mind. Never having travelled far from his hillside, he does not suspect himself, but tells his stories with fidelity and gusto to the minutest details, — as much as Herodotus his histories.

The leaves of some trees merely wither, turn brown, and drop off at this season, without any conspicuous flush of beauty, while others now first attain to the climax of their beauty.

There is a more or less general reddening of the leaves

at this season, down to the cinquefoil and mouse-ear, sorrel and strawberry under our feet. White oaks are still quite green, with a few distinct *red* leaves intermixed. A great many red maples are merely yellow; more, scarlet, in some cases deepening to crimson.

Looking at the pines of Trillium Woods, I see that the pitch pines have generally a rounded head, composed of countless distinct small rounded masses of foliage, the tops of their plumes, while the white pines are more smooth, or only flaky.

Since the cooler weather many crickets are seen clustered on warm banks and by sunny wall-sides. It is evident from their droppings that the woodchucks (?)[1] eat many of them these evenings.

I go through Stow's Wood and up Laurel Glen eastward. The chickadees of late have winter ways, flocking after you.

This changing of the leaves — their brighter tints — must have to do with cold, for it begins in the low meadows and in frosty hollows in the woods. There is where you must look as yet for the bright tints. I see the sprouts at the base of an old red oak for four or five feet upward, investing its trunk, all clear bright red, while all above is green. The shrub oak leaves around are more yellow or scarlet than the red. At the bottom of this hollow, the young walnut leaves have just been killed by the frosts while still green, and generally the hazel leaves also, but not the oaks, cherries, etc., etc. Many little maples in those coldest places have already dropped all their leaves. Gener-

[1] Skunks?

ally in low ground many maple and birch and locust leaves have fallen. Grape leaves were killed and crisped by the last frost.

The fringed gentian at Hubbard's Close has been out some time, and most of it already withered.

In the clintonia swamp I see where some animal has been getting the seeds of the skunk-cabbage out of their pericarp. You may take a dry walk there for a quarter of a mile along the base of the hill through this open swamp, where there is no underwood, all the way in a field of cinnamon fern four or five feet high and level, brushing against its light fronds, which offer now no serious obstacle. They are now generally imbrowned or crisp. In the more open swamp beyond, these ferns, recently killed by the frost and exposed to the sun, fill the air with a very strong sour scent, as if your nose [were] over a hogshead of vinegar. When I strip off a handful of the frond I find it is the cinnamon fern. I perceive it afterward in different parts of the town.

The erechthites down (fire-weed) is conspicuous in sprout-lands of late, since its leaves were killed.

Oct. 3. The *Rhus radicans* also turns yellow and red or scarlet, like the *Toxicodendron*. Asters, and still more goldenrods, look quite rare now. See a cowbird alone.

Getting over the wall near Sam Barrett's the other day, I had gone a few rods in the road when I met Prescott Barrett, who observed, "Well, you take a walk round the square sometimes." So little does he

know of my habits. I go across lots over his grounds every three or four weeks, but I do not know that I ever walked round the square in my life.

How much more agreeable to sit in the midst of old furniture like Minott's clock and secretary and looking-glass, which have come down from other generations, than in [*sic*] that which was just brought from the cabinet-maker's and smells of varnish, like a coffin! To sit under the face of an old clock that has been ticking one hundred and fifty years, — there is something mortal, not to say immortal, about it! A clock that began to tick when Massachusetts was a province. Meanwhile John Beatton's heavy tombstone is cracked quite across and widely opened.[1]

Oct. 4. A. M. — By boat to Conantum.

River fallen again. Barberrying and graping. Many of the grapes shrivelled and killed by frost now, and the leaves mostly fallen. The yellow leaves of the white willow thickly strew the bottom of my boat. Willows, elms, etc., shed their oldest leaves first, even like pines.[2] The recent and green ones are seen mottling a yellowish ground, especially in the willow; and, in the case of the willow, at least, these green ones wither and fall for the most part without turning yellow at all.

The button-bushes are generally greenish-yellow now; only the highest and most exposed points brown and crisp in some places. The black willow, rising above them, is crisped yellowish-brown, so that the

[1] It has fallen also and has been set up.

[2] [Altered in pencil so as to read, " These willows shed," etc.]

general aspect of the river's brim now is a modest or sober ripe yellowish-brown, — generally no bright colors. When I scare up a bittern from amid the weeds, I say it is the color of that bird's breast, — or body generally, for the darker part of its wings correspond to the sere pickerel-weed. Now that the pontederia is brown, the humble, weedy *green* of the shore is *burweed*, polygonum, wool-grass, and, in some places, rushes. Such is the river's border ordinarily, — either these weeds mingled with the sere and dark-brown pontederia or a convex raised rim of button-bushes, two to four feet high by a rod wide, through [which] the black willows rise one to a dozen feet higher. Here and there, to be sure, are the purple-leaved *Cornus sericea*, yellowish sweet-gale, reddish rose bushes, etc., etc.

Alders are still a fresh green. The grape leaves are generally crisp and curled, having a very light-colored appearance, but where it is protected by other foliage it is still a dense canopy of greenish-yellow shields.

From the midst of these yellowing button-bushes, etc., I hear from time to time a half-warbled strain from some young sparrow who thinks it is spring.

Scared up from the low shore at the bend, on the south side, opposite Clamshell, a flock of seventy-five or one hundred of what appeared solitary tattlers (??), that went off with a *rippling* note, wheeled, and alighted there again.[1]

Now again, when other trees prove so fickle, the steadfast evergreenness of the pines is appreciated.

[1] Henry Haynes next year thought they might be "Black-backs."

Bright-tinted flaming scarlet or yellow maples amid pines show various segments of bright cones embosomed in green.

At Potter's Swamp, where they are all maples, it adds to the beauty of the maple swamp at this season that it is not seen as a simple mass of color, but, different trees being of different tints, — green, yellow, scarlet, crimson, and different shades of each, — the outline of each tree is distinct to where one laps on to another. Yet a painter would hardly venture to make them thus distinct a quarter of a mile off.[1]

Hear a catbird and chewink, both faint.

Fever-bush has begun to yellow. *Some* nightshade leaves are a very dark purple.

See a grackle on the shore, so near I see the light mark about the eye.

While I lived in the woods I did various jobs about the town, — some fence-building, painting, gardening, carpentering, etc., etc. One day a man came from the east edge of the town and said that he wanted to get me to brick up a fireplace, etc., etc., for him. I told him that I was not a mason, but he knew that I had built my own house entirely and would not take no for an answer. So I went.

It was three miles off, and I walked back and forth each day, arriving early and working as late as if I were living there. The man was gone away most of the time, but had left some sand dug up in his cow-yard for me to make mortar with. I bricked up a fireplace, papered a chamber, but my principal work was whitewashing

[1] [*Excursions*, p. 262; Riv. 321.]

ceilings. Some were so dirty that many coats would not conceal the dirt. In the kitchen I finally resorted to yellow-wash to cover the dirt. I took my meals there, sitting down with my employer (when he got home) and his hired men. I remember the awful condition of the sink, at which I washed one day, and when I came to look at what was called the towel I passed it by and wiped my hands on the air, and thereafter I resorted to the pump. I worked there hard three days, charging only a dollar a day.

About the same time I also contracted to build a wood-shed of no mean size, for, I think, exactly six dollars, and cleared about half of it by a close calculation and swift working. The tenant wanted me to throw in a gutter and latch, but I carried off the board that was left and gave him no latch but a button. It stands yet, — behind the Kettle house. I broke up Johnny Kettle's old "trow," in which he kneaded his bread, for material. Going home with what nails were left in a flower [*sic*] bucket on my arm, in a rain, I was about getting into a hay-rigging, when my umbrella frightened the horse, and he kicked at me over the fills, smashed the bucket on my arm, and stretched me on my back; but while I lay on my back, his leg being caught over the shaft, I got up, to see him sprawling on the other side. This accident, the sudden bending of my body backwards, sprained my stomach so that I did not get quite strong there for several years, but had to give up some fence-building and other work which I had undertaken from time to time.

I built the common slat fence for $1.50 per rod, or worked for $1.00 per day. I built six fences.

Minott and Rice are apt to tell me the same story many times over. Minott told me the other day again of his peach tree. John Richardson was going by with a basket full of peach-stones. "What are you going to do with them?" asked M. He said he was going to plant. "Well, give me two or three of them, and I'll try too." So he raised one fine tree, which bore first-rate rare-ripes as big as an apple, but after bearing once or twice something got into it and the tree died. They're short-lived things.

Oct. 5.[1] P. M. — To Yellow Birch Swamp.

I go by the river and Hunt's Bridge. A warm and bright October afternoon. One man is making a gutter, to be prepared for rains, in his piece recently laid down in Merrick's pasture, where the grass is just springing up. I see many haws still green and hard, though their leaves are mostly fallen. Do they ever turn red and edible? Their leaves are a very dull reddish cast. The surface of the river sparkles in this air here and there. I see in most orchards the apples in heaps under the trees, and ladders slanted against their twiggy masses. The earth shines now as much as, or more than, ever in spring, especially the bare and somewhat faded fields, pastures, stubble, etc. The light is reflected as from a ripe surface, no longer absorbed to secure maturity.

[1] Begins now ten days of perfect Indian summer without rain; and the eleventh and twelfth days equally warm, though rainy.

I go north by Jarvis's lane from the old pump-maker's house. There is not that profusion and consequent confusion of events which belongs to a summer's walk. There are few flowers, birds, insects, or fruits now, and hence what does occur affects us as more simple and significant. The cawing of a crow, the scream of a jay. The latter seems to scream more fitly and with more freedom now that some fallen maple leaves have made way for his voice. The jay's voice resounds through the vacancies occasioned by fallen maple leaves.

The mulberry [1] was perhaps the first tree that was conspicuously turned after the maples. Many maples are still quite green; so that their gala-day will be prolonged. I see some hickories now a crisped mass of imbrowned yellow, green in the recesses, sere brown on the prominences, though the eye does not commonly thus discriminate. The smooth sumach is very important for its mass of clear red or crimson. Some of it is now a very dark crimson.

In the old Carlisle road I see a great many pitch pine twigs or plumes, cast down, evidently, by squirrels, — but for what?

Many are now gathering barberries.

Am surprised to see a large sassafras tree, with its rounded umbrella-like top, without limbs beneath, on the west edge of the Yellow Birch Swamp, or east of Boulder Field. It is some sixteen inches in diameter. There are seven or eight within two rods. Leaves curled, but not changed. See a red squirrel cast down a chest-

[1] Or ash??

nut bur. The pigeon woodpecker utters his whimsical *ah-week ah-week*, etc., as in spring. The yellow birch is somewhat yellowed. See a cherry-bird. Many robins feeding on poke berries on Eb Hubbard's hill. There is a great abundance of poke there. That lowest down the hill, killed by frost, drooping and withered, no longer purple-stemmed, but faded; higher up it is still purple.

I hear the alarum of a small red squirrel. I see him running by fits and starts along a chestnut bough toward me. His head looks disproportionately large for his body, like a bulldog's, perhaps because he has his chaps full of nuts. He chirrups and vibrates his tail, holds himself in, and scratches along a foot as if it were a mile. He finds noise and activity for both of us. It is evident that all this ado does not proceed from fear. There is at the bottom, no doubt, an excess of inquisitiveness and caution, but the greater part is make-believe and a love of the marvellous. He can hardly keep it up till I am gone, however, but takes out his nut and tastes it in the midst of his agitation. "See there, see there," says he, "who's that? O dear, what shall I do?" and makes believe run off, but does n't get along an inch, — lets it all pass off by flashes through his tail, while he clings to the bark as if he were holding in a race-horse. He gets down the trunk at last on to a projecting knot, head downward, within a rod of you, and chirrups and chatters louder than ever. Tries to work himself into a fright. The hind part of his body is urging the forward part along, snapping the tail over it like a whip-lash, but the fore part, for the most part, clings fast to the bark with

desperate energy. *Squirr*, "to throw with a jerk," seems to have quite as much to do with the name as the Greek *skia oura*, shadow and tail.

The lower limbs of trees often incline downwards as if from sympathy with the roots; the upper tend upwards with the *leading* stem.

I found on the 4th, at Conantum, a half-bushel of barberries on one clump about four feet in diameter at base, falling over in wreaths on every side. I filled my basket, standing behind it without being seen by other pickers only a dozen rods off. Some great clumps on Melvin's preserve, no doubt, have many more on them.

I hear nowadays again the small woodpecker's sharp, shrill note from high on the trees. . . .

It is evident that some phenomena which belong only to spring and autumn here, lasted through the summer in that latitude, as the peeping of hylodes and blossoming of some flowers that long since withered here were there still freshly in bloom, in that fresher and cooler atmosphere, — the calla for instance. To say nothing of the myrtle-bird and *F. hyemalis* which breed there, but only transiently visit us in spring and fall. Just as a river which here freezes only a certain distance from the shore, follow it further north, is found to be completely bridged over. The toads, too, as I have said, rang at this season. What is summer where Indian corn will not ripen?

Oct. 6. P. M. — To Saw Mill Brook *via* Hubbard's Close.

A beautiful bright afternoon, still warmer than yesterday. I carry my coat on my arm. This weather makes the locust to be heard, — many of them. I go along the hill from the old burying-ground and descend at Minott's. Everything — all fruits and leaves, the reddish-silvery feathery grass in clumps,[1] even the surfaces of stone and stubble — are all ripe in this air. Yes, the hue of maturity has come even to that fine silver-topped feathery grass, two or three feet high, in clumps on dry places. I am riper for thought, too.

Of trees which are numerous here and form considerable masses or groups, those now sufficiently changed in their color to attract the eye generally are red maple (in prime), — *N. B.*, the *white maples* began in water long ago, but are rare, — white birch (perhaps in prime), *young* oaks in sprout-lands, etc. (especially young scarlet oaks), white ash, white pines (when near), elms, buttonwoods, and perhaps walnuts. Some others are equally changed, but so rare or distant from the village as to make less impression on me.

The shrubs now generally conspicuous from some distance, from their changed color and mass, are huckleberries and blueberries (high and low), smooth sumach and *Rhus venenata*, woodbine, button-bush, and grape perhaps.

I observe too that the ferns of a rich brown (being sere), about swamps, etc., are an important feature. A broad belt of rich brown (and crisp) ferns stands about many a bright maple swamp.

Some maples are in form and *color* like hickories,

[1] *Andropogon scoparius.*

tall and irregular. It, indeed, admits of singular variety in form and color. I see one now shaped like a hickory which is a very rich yellow with a tinge of brown, which, when I turn my head slightly, concealing the trunk, looks like a mass of yellow cloud, wreath upon wreath, drifting through the air, stratified by the wind.[1]

The trumpet-weeds are perfectly killed sere brown along the fences.

Think what a change, unperceived by many, has within a month come over the landscape! Then the general, the universal, hue was green. Now see those brilliant scarlet and glowing yellow trees in the lowlands a mile off! I see them, too, here and there on the sides of hills, standing out distinct, mere bright [an indecipherable word] and squads perchance, often in long broken lines, and so apparently elevated by their distinct color that they seem arranged like the remnants of a morning mist just retreating in a broken line along the hillsides. Or see that crowd in the swamp half a mile through, all vying with one another, a blaze of glory. See those crimson patches far away on the hillsides, like dense flocks of crimson sheep, where the huckleberry reminds of recent excursions. See those patches of rich brown in the low grounds, where the ferns stand shrivelled. See the greenish-yellow phalanxes of birches, and the crisped yellowish elm-tops here and there. We are not prepared to believe that the earth is now so parti-colored, and would present to a bird's eye such distinct masses of bright color. A great painter is at work. The very pumpkins yellow-

[1] [*Excursions*, p. 262; Riv. 321.]

ing in the fields become a feature in the landscape, and thus they have shone, maybe, for a thousand years here.

I have just read Ruskin's "Modern Painters." I am disappointed in not finding it a more out-of-door book, for I have heard that such was its character, but its title might have warned me. He does not describe Nature as Nature, but as Turner painted her, and though the work betrays that he has given a close attention to Nature, it appears to have been with an artist's and critic's design. How much is written about Nature as somebody has portrayed her, how little about Nature as she is, and chiefly concerns us, *i. e.* how much prose, how little poetry!

Going through Ebby Hubbard's woods, I see thousands of white pine cones on the ground, fresh light brown, which lately opened and shed their seeds and lie curled up on the ground. The seeds are rather pleasant or nutritious tasting, taken in quantity, like beechnuts, methinks. I see a great quantity of hypopitys, now all sere, along the path in the woods beyond. Call it Pine-Sap Path. It seems to have been a favorable season for it. It was evidently withered earlier than the tobacco-pipe, which is still *pretty* white!

Going through the Ministerial sprout-lands, I see the *young* oaks generally turning scarlet, and chestnuts, too, the young and also the old.

The lower chestnut leaves are among the most interesting now when closely inspected, varying from green to yellow, very finely and richly peppered with brown and green spots, at length turning brown with

a tinge of crimson; but they, like others, must be seen on the twig, for they fade immediately, or in one night, if plucked. These brilliant leaves are as tender and inclined to wilt and fade as flowers, indeed are more transitory.

The amelanchier is yellowing and reddening a little, and also falling. I see *Lobelia inflata* leaves in the shade, a peculiar hoary white.

I see one or two chestnut burs open on the trees. The squirrels, red and gray, are on all sides throwing them down. You cannot stand long in the woods without hearing one fall.

As I came up the Turnpike, I smelt that strong-scented — like carrion, etc. — obscene fungus at the mossy bank, and I saw a dozen of those large flat oval black bugs with light-colored shoulder-pieces, such as, methinks, I see on carrion, feeding on its remnants. . . .

The frontier houses [1] preserve many of the features of the logging-camp. . . .

Looking up Trout Stream, it seemed as wild a place for a man to live as we had seen. What a difference between a residence there and within five minutes' walk of the depot! What different men the two lives must turn out!

Oct. 7. P. M. — To Cliffs and Walden.

Little chincapin oaks are partly turned, dull scarlet or yellow as it may happen, nearly in prime, not fallen. Some of their leaves (as well as of the white oak) are gnawed into lace regularly about the edges. Horn-

[1] [In Maine.]

beam generally green still, but becoming yellowish-brown and falling. Black alder still green. Elder is greenish-yellow. I see *some* panicled andromeda dark-red or crimson. Swamp-pink a *dark* reddish purple where exposed. Beach plum begins to turn a clear pale yellow in dry places. Sage willow is fairly yellowing and some even falling.

Crossing Depot Brook, I see many yellow butterflies fluttering about the *Aster puniceus*, still abundantly in bloom there.

I go across Bartonia Meadow direct to Bear Garden Hill-side. Approaching the sand-slide, I see, some fifty rods off, looking toward the sun, the top of the maple swamp just appearing over the sheeny russet edge of the hill, — a strip, apparently twenty rods long and ten feet deep, of the most intensely brilliant scarlet, orange, and yellow, equal to any flowers or fruits or any tints ever painted. As I advance, lowering the edge of the hill, which makes the firm foreground or lower frame to the picture, the depth of this brilliant grove revealed steadily increases, suggesting that the whole of the concealed valley is filled with such color.[1] As usual, there is one tree-top of an especially brilliant scarlet, with which the others contrast.

One wonders that the tithing-men and fathers of the town are not out to see what the trees mean by their high colors and exuberance of spirits, fearing that some mischief is brewing. I do not see what the Puritans did at that season when the maples blazed out in scarlet. They certainly could not have worshipped

[1] [*Excursions*, p. 262; Riv. 321, 322.]

in groves then. Perhaps that is what they built meeting-houses and surrounded them with horse-sheds for.[1]

No wonder we must have our annual cattle-show and fall training and perhaps Cornwallis, our September courts, etc. Nature holds her annual fair and gala-days in October in every hollow and on every hillside.

Look into that hollow all aglow, where the trees are clothed in their vestures of most dazzling tints. Does it not suggest a thousand gypsies beneath, rows of booths, and that man's spirits should rise as high, that the routine of his life should be interrupted by an analogous festivity and rejoicing?[2]

It is the reign of crickets now. You see them gliding busily about over all sunny surfaces. They sometimes get into my shoes; but oftener I have to empty out the seeds of various shrubs and weeds which I have been compelled to transport.

Looking toward the sun from Lupine Bank, I see bloody patches of blackberry vines amid the fine hoary and sheeny grass of the pasture. Since the frosts such pastures are already a hoary russet.

Some shrub oaks are yellow, others reddish.

When I turn round half-way up Fair Haven Hill, by the orchard wall, and look northwest, I am surprised for the thousandth time at the beauty of the landscape, and I sit down to behold it at my leisure. I think that Concord affords no better view. It is always incred-

[1] [*Excursions*, pp. 262, 263; Riv. 322.]

[2] [*Excursions*, p. 275; Riv. 337, 338.]

ibly fair, but ordinarily we are mere objects in it, and not witnesses of it. I see, through the bright October air, a valley extending southwest and northeast and some two miles across, — so far I can see distinctly, — with a broad, yellow meadow tinged with brown at the bottom, and a blue river winding slowly through it northward, with a regular edging of low bushes on the brink, of the same color with the meadow. Skirting the meadow are straggling lines, and occasionally large masses a quarter of a mile wide, of brilliant scarlet and yellow and crimson trees, backed by and mingled with green forests and green and hoary russet fields and hills; and on the hills around shoot up a million scarlet and orange and yellow and crimson fires amid the green; and here and there amid the trees, often beneath the largest and most graceful of those which have brown-yellow dome-like tops, are bright white or gray houses; and beyond stretches a forest, wreath upon wreath, and between each two wreaths I know lies a similar vale; and far beyond all, on the verge of the horizon, are half a dozen dark-blue mountain-summits. Large birds of a brilliant blue and white plumage are darting and screaming amid the glowing foliage a quarter of a mile below, while smaller blue birds warble faintly but sweetly around me.[1]

Such is the dwelling-place of man; but go to a caucus in the village to-night or to a church to-morrow, and see if there is anything said to suggest that the inhabitants of those houses know what kind of world they live in. But hark! I hear the tolling of a distant

[1] The autumnal tints were more generally diffused there Oct. 10th.

funeral bell, and they are conveying a corpse to the churchyard from one of the houses that I see, and its serious sound is more in harmony with this scenery than any ordinary bustle could be. It suggests that a man must die to his present life before he can appreciate his opportunities and the beauty of the abode that is appointed him.

I do not know how to entertain one who can't take long walks. The first thing that suggests itself is to get a horse to draw them, and that brings us at once into contact with stablers and dirty harness, and I do not get over my ride for a long time. I give up my forenoon to them and get along pretty well, the very elasticity of the air and promise of the day abetting me, but they are as heavy as dumplings by mid-afternoon. If they can't walk, why won't they take an honest nap and let me go in the afternoon? But, come two o'clock, they alarm me by an evident disposition to sit. In the midst of the most glorious Indian-summer afternoon, there they sit, breaking your chairs and wearing out the house, with their backs to the light, taking no note of the lapse of time.

As I sat on the high bank at the east end of Walden this afternoon, at five o'clock, I saw, by a peculiar intention or dividing of the eye, a very striking subaqueous rainbow-like phenomenon. A passer-by might, perhaps would, have noticed that the bright-tinted shrubs about the high shore on the sunny side were reflected from the water; but, unless on the alert for such effects, he would have failed to perceive the full beauty of the phenomenon. Unless you look for re-

flections, you commonly will not find them. Those brilliant shrubs, which were from three to a dozen feet in height, were all reflected, dimly so far as the details of leaves, etc., were concerned, but brightly as to color, and, of course, in the order in which they stood, — scarlet, yellow, green, etc.; but, there being a slight ripple on the surface, these reflections were not true to their height though true to their breadth, but were extended downward with mathematical perpendicularity, three or four times too far, forming sharp pyramids of the several colors, gradually reduced to mere dusky points. The effect of this prolongation of the reflection was a very pleasing softening and blending of the colors, especially when a small bush of one bright tint stood directly before another of a contrary and equally bright tint. It was just as if you were to brush firmly aside with your hand or a brush a fresh line of paint of various colors, or so many lumps of friable colored powders. There was, accordingly, a sort of belt, as wide as the whole height of the hill, extending downward along the whole north or sunny side of the pond, composed of exceedingly short and narrow inverted pyramids of the most brilliant colors intermixed. I have seen, indeed, similar inverted pyramids in the old drawings of tattooing about the waists of the aborigines of this country. Walden, too, like an Indian maiden, wears this broad rainbow-like belt of brilliant-colored points or cones round her waist in October. The color seems to be reflected and re-reflected from ripple to ripple, losing brightness each time by the softest possible gradation, and tapering toward the

beholder, since he occupies a mere point of view. This is one of the prettiest effects of the autumnal change.

The harvest of leaves is at hand in some valleys, and generally the young deciduous trees on hillsides have the brilliant tint of ripe fruits. Already many windfalls strew the ground under the maples and elms, etc. I see one or two maple shrubs quite bare, while many large maples are still quite green.

In that rainbow belt we have color, which is commonly so rare and precious and confined to precious stones, in the utmost profusion. The ripples convey the reflection toward us, till all the color is winnowed out and spilled between them and only the dusky points reach near to this side where we stand. It is as if a broad belt (or waist-cloth) of sharp and narrow inverted cones or pyramids of bright colors, softly blended like fairy worsted work, their bases rising to a line mathematically level about the waist of the pond. That fall river Indian, like the Almouchicois generally, wore a belt of hollow tubes.

It was strange that only the funeral bell was in harmony with that scene, while other sounds were too frivolous and trivial, as if only through the gate of death would man come to appreciate his opportunities and the beauty of the world he has abused. In proportion as death is more earnest than life, it is better than life.

The sun set just before I reached the railroad causeway on my return, but then there was not a cloud to be seen in the horizon. Coming through the Irish [*sic*]

field, the mountains were purple, much redder than a grape. . . .

That simple and mild nasal chant [1] affected me like the dawn of civilization to the wilderness. I thought of "Lo, the poor Indian! whose untutored mind," etc. There is always a slight haze or mist on the brow of the Indian. The white man's brow is clear and distinct. It is eleven o'clock in the forenoon with him. It is four o'clock in the morning with the Indian.

Oct. 8. P. M. — Up Assabet.

Hemlock leaves are copiously falling. They cover the hillside like some wild grain. The changing red maples along the river are past their prime now, earlier than generally elsewhere. They are much faded, and many leaves are floating on the water. Those white maples that were so early to change in the water have more than half lost their leaves.

Walking through the Lee farm swamp, a dozen or more rods from the river, I found a large box trap closed. I opened it and found in it the remains of a gray rabbit, — skin, bones, and mould, — closely fitting the right-angled corner of one side. It was wholly inoffensive, as so much vegetable mould, and must have been dead some years. None of the furniture of the trap remained, but the box itself, with a lid which just moved on two rusty nails; the stick which held the bait, the string, etc., etc., were all gone. The box had the appearance of having been floated off in an upright position by a freshet. It had been a rabbit's

[1] [See *Maine Woods*, pp. 197, 198; Riv. 244.]

living tomb. He had gradually starved to death in it. What a tragedy to have occurred within a box in one of our quiet swamps! The trapper lost his box, the rabbit its life. The box had not been gnawed. After days and nights of moaning and struggle, heard for a few rods through the swamp, increasing weakness and emaciation and delirium, the rabbit breathes its last. They tell you of opening the tomb and finding by the contortions of the body that it was buried alive. This was such a case. Let the trapping boy dream of the dead rabbit in its ark, as it sailed, like a small meeting-house with its rude spire, slowly, with a grand and solemn motion, far amid the alders.

Four dark-colored ducks (white beneath), *maybe* summer, or teal (??), with a loud *creaking* note of alarm, flew away from near the shore and followed the bend of the river upward.

I see and hear white-throated sparrows on the swamp white oaks by the river's edge, uttering a faint sharp *cheep*.

The chipmunk,[1] the wall-going squirrel, that will cross a broad pasture on the wall, now this side, now that, now on top, and lives under it, — as if it were a track laid for him expressly.

Oct. 9. P. M. — To Dugan Desert and Ministerial Swamp.

The elms are now at the height of their change. As I look down our street, which is lined with them, now clothed in their very rich brownish-yellow dress, they

[1] An allied one is called the wall-mouse in the West.

remind me of yellowing sheaves of grain, as if the harvest had come to the village itself, and we might expect to find some maturity and *flavor* in the thoughts of the villagers at last. Under those light-rustling yellow piles, just ready to fall on the heads of the walker, how can any crudity or greenness of thought or act prevail? The street is a great harvest-home. It would be worth the while to set out these trees, if only for their autumnal value. Think of these great yellow canopies or parasols held over our heads and houses by the mile together, making the village all one and compact, an *ulmarium*. And then how gently and unobserved they drop their burdens and let in the sun when it is wanted, their leaves not heard when they fall on our roofs and in our streets.

I see the traveller driving into the village under its canopy of elm-tops, with his crop, as into a great granary or barn-yard. I am tempted to go thither as to a husking of thoughts, now dry and ripe and ready to be separated from their integuments, but I foresee that it will be chiefly husks and little thought, blasted pig-corn, fit only for cob-meal.[1] Is there, then, indeed, no thought under this ample husk of conversation and manners? There is the sermon husk, the lecture husk, and the book husk, and are they all only good to make mats of and tread under foot?

Looking from railroad bridge, birches are perhaps at the height of their change now; hickories are about the color of elms or a little browner; balm-of-Gileads,

[1] [*Excursions*, pp. 263, 264; Riv. 322–324.]

about as birches; many ash trees are a mere finely divided dull-reddish color; swamp white oaks are green, yellow, and brown, much less ripe than elms, not much yellowed yet.

Under the pines by the Clamshell, that fine purple grass is now withered and faded to a very light brown which reflects the autumnal light. Patches of rabbit's clover amid the blackberry vines are now quite hoary if not silvery. I thought it a mass of *Aster Tradescanti* at first, but they are not so common. Many plants, like them, remind you by their color of the frosts.

Sprout-lands, with their oaks, chestnuts, etc., etc., are now at their height of color.

From Lupine Hill, not only the maples, etc., have acquired brighter tints at this season, but the pines, by contrast, appear to have acquired a new and more liquid green, and to some extent this is true, — where their old leaves have chiefly fallen, which is not yet generally the case, however.

I see now that, near the river and low on the meadows, the maple stands with paled fires, burned out, thin-leaved, a salmon or faint cherry tint, ready to surrender to the first smart frost.

It has come to this, — that the lover of art is one, and the lover of nature another, though true art is but the expression of our love of nature. It is monstrous when one cares but little about trees but much about Corinthian columns, and yet this is exceedingly common.

Scarlet oaks have fairly begun to blaze, — especially their lower limbs, — in low places which have

most felt the frost. Hazels at their height, varying from green through dull crimson to dull scarlet.

Going along the mill road, the common shrub oaks make a dull-red or salmon impression in the mass at a little distance, from which brighter scarlet oaks stand out.

On F. Wheeler's clearing, over the swamp, many shrub oak leaves fallen, laying bare the acorns, which are browned. Many leaves already thickly strew the dry, sandy ground.

In the swamp, some twenty-foot maples are already bare, and some white pines are as yellow as birches. The spruces appear unchanged, even close at hand, though many leaves have fallen and are falling. The *Viburnum nudum* in the swamp is a clear handsome crimson. The young cherry yellow, with a faint cherry tinge. The mulberry is browned and falling, though it is but slightly tinged with yellow.

I see an Irishman digging mud at Harrington's mud-hole. He digs it out rapidly, — a hole four feet wide by eight long, — leaving a water-tight partition, eighteen or twenty inches wide, on two sides next the water. At three feet it is clear white sand, whiter than common sand-hills. Why? Why is there no stain of vegetation in it? It requires some skill to save much of the partition at last. This man first pares off the top nearly to the level of the water, then, standing on it, digs it away as the water rushes in, — though it fills it before he has got a foot, — and he thus saves about half its depth. No doubt his work is the more amusing for requiring this exercise of thought.

Saw a jay stealing corn from a stack in a field.

Oct. 10. P. M. — To Walden over Fair Haven Hill.

Some *Prinos verticillatus* yellowing and browning at once, and in low ground just falling and leaving the bright berries bare.

From the upper side of Wheeler's clearing on Fair Haven Hill, I see five smokes, now at 3.30 P. M., — one toward Lexington, one over Bedford, one over Billerica, one, very copious, as much further north, and one over Carlisle. These are all dark, seen against the sky and from the sun, and, except the first, apparently beyond the respective towns. Going over to the southwest side of the hill, I see one large wide-spread smoke toward Wachusett and rising against it, apparently beyond the height of land between the Concord and Nashua, and another much nearer, toward Stow. These two are light, or smoke-colored, because seen more toward the sun, perhaps; or is it solely because seen against the mountain and woods? There is another, the eighth, a little south of west, nearly under the sun, but this, being very distant and seen against the sky, is dusky. I could not see south and southwest.

I think that these smokes are the most distant sign of the presence of man on the globe that I detect with my unarmed eye, — of man's cohabitancy. I see the evidence that so many farmers with their hired men and boys are at work in their clearings from five to fifteen miles off. I see this smoky telegraph for hours marking the locality and occupation of some farmer and suggesting peaceful rural enterprises and improvements which I may yet see described in the agricul-

tural reports, though I may never have seen, and perhaps never shall see, that farm or farmer. Considering the slight evidence I have of their existence, they are as far away as if in another quarter of the globe. Sometimes the smoke is seen beyond a distant range of hills, spreading along, low and bluish, seen against a more distant hill or mountain; at others it is a column faintly and dimly seen against the horizon, but more distinctly revealed by a dusky but cloud-like expansion above. It may be a dusky almost level bar, slanting upward a little, like a narrow banner. The smokes from a dozen clearings far and wide, from a portion of the earth thirty miles or more in diameter, reveal the employment of many husbandmen at this season. Thus I see the woods burned up from year to year. The telltale smokes reveal it. The smokes will become rarer and thinner year by year, till I shall detect only a mere feathery film and there is no more brush to be burned.

Generally speaking, the autumnal tints affect the color of the landscape for only two or three miles, but I distinguish maples by their color half a mile north of Brooks Clark's, or some three miles distant, from this hill, — one further east very bright. Also I see them in the northeast, or on or near, apparently, a road between Bedford and Billerica, at least four or five miles distant!! This is the furthest I can see them.

Descend from Fair Haven Hill through Stow's sprout-land to railroad. See chincapin oaks in frosty places sere brown and ready to fall, while in others

they are still green, in woods. They turn of various colors, some quite handsome clear scarlet or red. Many young white oaks in similar frosty places are all withered and shrivelled. I see in the woods some *Smilacina racemosa* leaves, — which are usually a uniform pale-brown, — very wildly and remarkably marked, — *weirdly*. They are pale-brown, almost white, and somewhat curled, varied with rectilinear broad black (brown, seen close to) marks along the veins, say one inch, more or less, long by one tenth inch wide, with square corners. (Suppose you were to have a neckerchief after this pattern!) The whole plant gracefully bent almost horizontally with the weight of its dense raceme of bright cherry-red berries at the end.

Generally speaking, chestnuts, hickories, aspens, and some other trees attain a fair clear yellow only in small specimens in the woods or sprout-lands, or in their lower leaves.

You see now in sprout-lands young scarlet oaks of every degree of brightness from green to dark scarlet. It is a beautifully formed leaf, with its broad, free, open sinuses, — worthy to be copied in sculpture. A very agreeable form, a bold, deep scallop, as if the material were cheap. Like tracery. The color is more mingled with light than in the less deeply scalloped oak leaves. It is a less simple form. Though the connected outline is a broad oval, it is much improved by deep bays of light, as a simple oval pond would be improved by four or five broad, rounded promontories extending far into it on different sides, while the watery

bays, instead of being rounded at bottom, extended far inland in sharp friths. The leaf suggests a lavish expense in the creation of those deep scallops, as if so much material had been cut out and thrown away.[1]

This is the end of the sixth day of glorious weather, which I am tempted to call the finest in the year, so bright and serene the air and such a sheen from the earth, so brilliant the foliage, so pleasantly warm (except, perhaps, this day, which is cooler), too warm for a thick coat, — yet not sultry nor oppressive, — so ripe the season and our thoughts. Certainly these are the most brilliant days in the year, ushered in, perhaps, by a frosty morning, as this. As a dewy morning in the summer compared with a parched and sultry, languid one, so a frosty morning at this season compared with a merely dry or foggy one. These days you may say the year is ripened like a fruit by frost, and puts on brilliant tints of maturity but not yet of decay. It is not sere and withered as in November. See the heaps of apples in the fields and at the cider-mill, of pumpkins in the fields, and the stacks of corn-stalks and the standing corn. Such is the season. The morning frosts have left a silvery hue on the fine pasture grasses. They have faded to a kindred color.

Oct. 11. *Sunday.* P. M. — Up Assabet.

River lower than before since winter at least; very low.

Another frost last night, although with fog, and this afternoon the maple and other leaves strew the water, and it is almost a leaf harvest. I see some fine clear

[1] [*Excursions*, pp. 279, 280; Riv. 342, 343.]

yellows from the *Rhus Toxicodendron* on the bank by the hemlocks and beyond. The osmunda ferns are generally withered and brown except where very much protected from frost. The *O. regalis* is the least generally withered of them. The onoclea is much later and still generally green along the bank, or faded white here and there.

Looking at the reflection of the bank by the Hemlocks, the reflected sun dazzles me, and I approach nearer to the bank in order to shut it out (of course it disappears sooner in the reflection than the substance, because every head is raised above the level of the water), and I see in the reflection the fine, slender grasses on the sharp or well-defined edge of the bank all glowing with silvery light, a singularly silvery light to be seen in the water [?], and whose substance I cannot see to advantage with my head thus high, since the sun is in the way.

This is the seventh day of glorious weather. Perhaps these might be called Harvest Days. Within the week most of the apples have been gathered; potatoes are being dug; corn is still left in the fields, though the stalks are being carried in. Others are ditching and getting out mud and cutting up bushes along fences, — what is called "brushing up," — burning brush, etc.

These are cricket days.

The river is so low that I run against several rocks, which I must have floated over three or four days ago, and I see many snags and water-logged trunks on the bottom or partly exposed, which were then invisible.

It is remarkable how many trees — maple and swamp white [oak], etc. — which stand on the bank of the river, being undermined by the water or broken off by the ice or other cause, fall into the stream and finally sink to the bottom and are half buried there for many years. A great deal of wood, especially of the kinds named, is thus lost. They last longer there probably than in *favorable* localities out of water. I see still the timber foundation of an old dam just above Spencer Brook, extending across the river on the bottom, though there has been nothing above water within my recollection. The large black oaks in front of Prescott Barrett's are one by one falling into the river, and there are none to succeed them. They were probably left to skirt the stream when the other wood was cut, and now, when they are undermined, there are none behind to supply their places.

Mr. Conant of Acton tells me that there was a grist-mill built over the river there by Sam Barrett's grandfather, and that he remembers going to it when he was fourteen. He went in at the Lee house and crossed the river by a bridge at the mill. He says that it is as much as sixty years since the mill was standing. Minott thinks it is not quite so long since. He remembers the bridge there, not a town one, nor strong enough for a horse and cart. Thinks the mill was discontinued because Dr. Lee complained of its flowing his woodland. They used to stop with their carts this side and carry their bags back and forth over the bridge on their shoulders. Used a small and poor road across to Lee's farm.

Oct. 12. P. M. — To Annursnack.

The eighth fine day, warmer than the last two. I find one or two house-leek blossoms even yet fresh, and all the rest crisp. The fringed gentian by the brook opposite is in its prime, and also along the north edge of the Painted-Cup Meadows. The stems of the blue vervain, whose flowers and leaves are withered and brown, are nearly as handsome and clear a purple as those of the poke have been, from top to bottom.

Looking from the Hill. The autumnal tints generally are much duller now than three or four days ago, or before the last two frosts. I am not sure but the yellow now prevails over the red in the landscape, and even over the green. The general color of the landscape from this hill is now russet, *i. e.* red, yellow, etc., mingled. The maple fires are generally about burnt out. Yet I can see very plainly the colors of the sprout-land, chiefly oak, on Fair Haven Hill, about four miles distant, and also yellows on Mt. Misery, five miles off, also on Pine Hill, and even on Mt. Tabor, indistinctly. Eastward, I distinguish red or yellow in the woods as far as the horizon, and it is most distant on that side, — six miles, at least.

The huckleberries on Nagog Hill are *very* red. The smaller and tenderer weeds were in their prime, methinks, some weeks ago. They have felt the frosts earlier than the maples and other trees, and are now withered generally.

I see a very distant mountain house in a direction a little to the west of Carlisle, and two elms in the horizon on the right of it. Measuring carefully on the map

of the county, I think it must be the Baptist Church in North Tewksbury, within a small fraction of fourteen miles from me. I think that this is the greatest distance at which I have seen an elm without a glass. There is another elm in the horizon nearly north, but not so far. It looks very much larger than it is. Perhaps it looms a little. The elm, I think, can be distinguished further than any other tree, and, however faintly seen in the distant horizon, its little dark dome, which the thickness of my nail will conceal, just rising above the line of the horizon, apparently not so big as a prominence on an orange, it suggests ever the same quiet rural and domestic life passing beneath it. It is the vignette to an unseen idyllic poem. Though that little prominence appears so dark there, I know that it is now a rich brownish-yellow canopy of rustling leaves, whose harvest-time is already come, sending down its showers from time to time. Homestead telegraphs to homestead through these distant elms seen from the hilltops. I fancy I hear the house-dog's bark and lowing of the cows asking admittance to their yard beneath it. The tea-table is spread; the master and mistress and the hired men now have just sat down in their shirt-sleeves. Some are so lifted up in the horizon that they seem like portions of the earth detached and floating off by themselves into space. Their dark masses against the sky can be seen as far, at least, as a white spire, though it may be taller. Some of these trees, seen through a glass, are not so large. . . .

This was what those scamps did in California. The trees were so grand and venerable that they could not

afford to let them grow a hair's breadth bigger, or live a moment longer to reproach themselves. They were so big that they resolved they should never be bigger. They were so venerable that they cut them right down. It was not for the sake of the wood; it was only because they were very grand and venerable.

Oct. 13. P. M. — To Poplar Hill.

Maple fires are burnt out generally, and they have fairly begun to fall and look smoky in the swamps. When my eyes were resting on those smoke-like bare trees, it did not at first occur to me why the landscape was not as brilliant as a few days ago. The outside trees in the swamps lose their leaves first.

The brilliancy of young oaks, especially scarlet oaks, in sprout-lands is dulled. These red maples and young scarlet oaks, etc., have been the most conspicuous and important colors, or patches of color, in the landscape. Those *most* brilliant days, then, so far as the autumnal tints are concerned, are over; *i. e.*, when we may be surprised at any turn by the sight of some incredibly bright and dazzling tree or grove of trees.

I noticed the first *large* white oaks wholly changed to a salmon-color, but not brilliant like those sprout-land fires. Are very large oaks never brilliant in their tints?[1]

The hickories on Poplar Hill have not lost any of their brilliancy, generally speaking. Some are quite green even. I look down into a mocker-nut, whose recesses and greater part are pure yellow, and from

[1] Yes.

this you pass through a ruddy orange in the more exposed leaves to a rich crispy brown in the leaves of the extreme twigs about the clusters of round green nuts.

The red of oaks, etc., is far more general now than three or four days ago, but it is also much duller, so that some maples that were a bright scarlet can now hardly be distinguished by their color from oaks, which have just turned red.

The Great Fields from this hill are pale-brown, often hoary — there is not yellow enough for russet — pastures, with very large red or purple patches of blackberry vines. You can only appreciate the effect of these by a strong and peculiar intention of the eye. We ordinarily do not see what is before us, but what our prejudices presume to be there.

The pitch and white pines on the north of Sleepy Hollow, *i. e.* north side the hill, are at the height of their change and are falling. Maybe they are later than on the south side of hills. They are at the height of their change, generally, though many needles fallen, carpeting the ground. Pinweeds are brown; how long? Some of the large ash trees, both *a* black and white, are quite bare of leaves already. With the red maples, then. Looking from this hill, green begins to look as rare and interesting as any color, — you may say begins to be a color by itself, — and I distinguish green streaks and patches of grass on most hillsides.

See a pretty large flock of tree sparrows, very lively and tame, drifting along and pursuing each other along a bushy fence and ditch like driving snow. Two

pursuing each other would curve upward like a breaker in the air and drop into the hedge again.

Some white willows are very fresh and green yet. This has been the ninth of those wonderful days, and one of the warmest. I am obliged to sit with my window wide open all the evening as well as all day. It is the earlier Indian summer.

Our cherry trees have now turned to mostly a red-orange color.

Oct. 14. P. M. — To White Pond.

Another, the tenth of these memorable days. We have had some fog the last two or three nights, and this forenoon it was slow to disperse, dog-day-like, but this afternoon it is warmer even than yesterday. I should like it better if it were not so warm. I am glad to reach the shade of Hubbard's Grove; the coolness is refreshing. It is indeed a golden autumn. These ten days are enough to make the reputation of any climate. A tradition of these days might be handed down to posterity. They deserve a notice in history, in the history of Concord. All kinds of crudities have a chance to get ripe this year. Was there ever such an autumn? And yet there was never such a panic and hard times in the commercial world. The merchants and banks are suspending and failing all the country over, but not the sand-banks, solid and warm, and streaked with bloody blackberry vines. You may run upon them as much as you please,[1] — even as the

[1] You cannot break them. If you should slump, 't is to a finer sand.

crickets do, and find their account in it. They are the stockholders in these banks, and I hear them creaking their content. You may see them on change any warmer hour. In these banks, too, and such as these, are my funds deposited, a fund of health and enjoyment. Their (the crickets) prosperity and happiness and, I trust, mine do not depend on whether the New York banks suspend or no. We do not rely on such slender security as the thin paper of the Suffolk Bank. To put your trust in such a bank is to be swallowed up and undergo suffocation. Invest, I say, in these country banks. Let your capital be simplicity and contentment. Withered goldenrod (*Solidago nemoralis*) is no failure, like a broken bank, and yet in its most golden season nobody counterfeits it. Nature needs no counterfeit-detector. I have no compassion for, nor sympathy with, this miserable state of things. Banks built of granite, after some Grecian or Roman style, with their porticoes and their safes of iron, are not so permanent, and cannot give me so good security for capital invested in them, as the heads of withered hardhack in the meadow. I do not suspect the solvency of these. I know who is their president and cashier.

I take all these walks to every point of the compass, and it is always harvest-time with me. I am always gathering my crop from these woods and fields and waters, and no man is in my way or interferes with me. My crop is not their crop. To-day I see them gathering in their beans and corn, and they are a spectacle to me, but are soon out of my sight. I am not gathering beans and corn. Do they think there are no fruits

but such as these? I am a reaper; I am not a gleaner. I go reaping, cutting as broad a swath as I can, and bundling and stacking up and carrying it off from field to field, and no man knows nor cares. My crop is not sorghum nor Davis seedlings. There are other crops than these, whose seed is not distributed by the Patent Office. I go abroad over the land each day to get the best I can find, and that is never carted off even to the last day of November, and I do not go as a gleaner.

The farmer has always come to the field after some material thing; that is not what a philosopher goes there for.

I see, in Hubbard's Grove, a large black birch at the very height of its change. Its leaves a clear, rich yellow; many strew the ground. Near by is a tupelo which is all a distinct yellow with a little green. Within a couple of rods a single hyla peeps interruptedly, bird-like.

Large oaks appear to be now generally turned or turning. The white, most conspicuous in sunny places, say a reddish salmon; began to change at lower limbs. Black oaks a brownish yellow. These large trees are not brilliant.

On the causeway I pass by maples here and there which are bare and smoke-like, having lost their brilliant clothing; but there it lies, nearly as bright as ever, on one side on the ground, making nearly as regular a figure as lately on the tree. I should rather say that I first observed the trees thus flat on the ground like a permanent colored and substantial shadow, and they

alone suggested to look for the trees that had borne them. They preserve these bright colors on the ground but a short time, a day or so, especially if it rains.[1]

I see a large flock of grackles, probably young birds, quite near me on William Wheeler's apple trees, pruning themselves and trying to sing. They *never* succeed; make a sort of musical spluttering. Most, I think, have brownish heads and necks, and some purple reflections from their black bodies.

There is a very little gossamer, mostly blowing off in large loops from the south side the bridge, the loose end having caught. I also see it here and there stretched across lanes from side to side, as high as my face.

Sat in the old pasture beyond the Corner Spring Woods to look at that pine wood now at the height of its change, pitch and white. Their change produces a very singular and pleasing effect. They are regularly parti-colored. The last year's leaves, about a foot beneath the extremities of the twigs on all sides, now changed and ready to fall, have their period of brightness as well as broader leaves. They are a clear yellow, contrasting with the fresh and liquid green of the terminal plumes, or this year's leaves. These two quite distinct colors are thus regularly and equally distributed over the whole tree. You have the warmth of the yellow and the coolness of the green. So it should be with our own maturity, not yellow to the very extremity of our shoots, but youthful and untried green ever putting forth afresh at the extremities, foretelling a maturity as yet unknown. The ripe leaves fall to the ground

[1] [*Excursions*, p. 265; Riv. 325.]

and become nutriment for the green ones, which still aspire to heaven. In the fall of the leaf, there is no fruit, there is no true maturity, neither in our science and wisdom.

Some aspens are a very fair yellow now, and trembling as in summer. I think it is they I see a mile off on Bear Garden Hill, amid the oaks and pines.

There is a very thick haze this afternoon and almost a furnace-like heat. I cannot see far toward the sun through it.

Approaching White Pond by the path, I see on its perfectly smooth surface what I at first mistake for a large raft of dead and black logs and limbs, but it soon elevates itself in the form of a large flock of black ducks, which go off with a loud quacking.

This, as other ponds now, when it is still, has a fine sparkle from skaters on it. I go along near the shore in the woods to the hill recently cleared on the east side. The clethra as an under-bush has an exceedingly pale yellow leaf. The nemopanthes on the hillside is like the amelanchier, yellowish with considerable ruddiness; the total effect is russet.

Looking now toward the north side of the pond, I perceive that the reflection of the hillside seen from an opposite hill is not so broad as the hillside itself appears, owing to the different angle at which it is seen. The reflection exhibits such an aspect of the hill, *apparently*, as you would get if your eye were placed at that part of the surface of the pond where the reflection seems to be. In this instance, too, then, Nature avoids repeating herself. Not even reflections in still water are like

their substances as seen by us. This, too, accounts for my seeing portions of the sky through the trees in reflections often when none appear in the substance. Is the reflection of a hillside, however, such an aspect of it as can be obtained by the eye directed to the hill itself from any single point of view? It plainly is not such a view as the eye would get looking upward from the immediate base of the hill or water's edge, for there the first rank of bushes on the lower part of the hill would conceal the upper. The reflection of the top appears to be such a view of it as I should get with my eye at the water's edge above the edge of the reflection; but would the lower part of the hill also appear from this point as it does in the reflection? Should I see as much of the under sides of the leaves there? If not, then the reflection is never a true copy or repetition of its substance, but a new composition, and this may be the source of its novelty and attractiveness, and of this nature, too, may be the charm of an echo. I doubt if you can ever get Nature to repeat herself exactly.

The occasional dimples on this pure sheeny surface in which the sky is reflected make you suspect as soon some mote fallen from the sky as risen from beneath, to disturb it.

Next to the scarlet, methinks the white shrub oaks make, or have made, the most brilliant show at a distance on hillsides. The latter is not very bright, unless seen between you and the sun, but there its abundant inward color is apparent.

At the head of the path by the pond, I saw a red squirrel, only a rod off in a white pine, eating a toad-

stool. It was a slightly convex white disk, (then) two inches in diameter. I saw where he had bitten off its white stump within a few feet of the base of the tree. I should not have called it an edible one; but he knows. He held it vertically with a paw on each side and what had been the lower side toward him, and was nibbling off the inside edge very fast, turning it round from time to time and letting some fragments drop, pausing to look at me. As a boy might nibble a biscuit. Are nuts scarce? I think it was not the edible one; was too big.

Veronica serpyllifolia in bloom.

Oct. 15. Rain at last, and end of the remarkable days. The springs and rivers have been very low. Millers have not water enough to grind their grists.

There has been a great fall of leaves in the night on account of this moist and rainy weather; but hardly yet that touch that brings down the rock maple. The streets are thickly strewn with elm and buttonwood and other leaves, *feuille-morte* color. Some elms and butternuts are quite bare. Yet the sugar maples in our streets are now in their prime and show unexpectedly bright and delicate tints, while some white maples by the river are nearly bare. I see, too, that all locusts did not become crisp and fall before this without acquiring a bright color. In the churchyard they are unwithered, just turning a pale yellow. How many plants are either yellow or scarlet! Not only maples, but rose bushes, hazel bushes, etc., etc. Rue is a conspicuous pale yellow for a weed.[1]

[1] *Vide* 20th, 1858.

I saw the other day a cricket standing on his head in a chocolate-colored (inside) fungus, only his tail-yards visible. He had sunk a well an inch deep, and was even then sinking it, perpendicularly, unconscious of what was going on above.

The ten days — at least — before this were plainly Indian summer. They were remarkably pleasant and warm. The latter half I sat and slept with an open window, though the first part of the time I had a little fire in the morning. These succeeded to days when you had worn thick clothing and sat by fires for some time.

Our staghorn sumach has just become a very rich scarlet. So, apparently, has the large one at Mrs. Simmonds's. They are later than the others; a yellower scarlet, almost orange.

It is another example of the oddity of the Orientals that yellow "is in the east a regal color, more especially so in China, where it is exclusively royal." (Field on Colors, 139.) Further west it was purple, regal and imperial.

The river lower this morning than before this year. Concord Bank has suspended.

Oct. 16. *Friday.* P. M. — Up Assabet.

It clears up *entirely* by noon, having been cloudy in the forenoon, and is as warm as before now. I stop a while at Cheney's shore to hear an incessant musical twittering from a large flock of young goldfinches which have dull-yellow and drab and black plumage, on maples, etc., while the leaves are falling. Young birds can hardly restrain themselves, and if they did not leave us, might

perchance burst forth into song in the *later* Indian-summer days.

I see dwarf cornel leaves on the hemlock bank, some green, some bright crimson. The onoclea has faded whiter still. Hemlock leaves are falling now faster than ever, and the trees are more parti-colored. The falling leaves look pale-yellow on the trees, but become reddish on the ground. The large poplar (*P. grandidentata*) is now at the height of its change, — clear yellow, but many leaves have fallen. The ostrya still holds its leaves. It is about the color of the elm at its height. I see red oaks now turned various colors, — red-brown or yellow-brown or scarlet-brown, — not commonly bright. The swamp white are greener yet.

Melvin is fishing for pickerel. Thinks this the best day for fishing we have had this long time; just wind enough. Says there are some summer ducks up the stream, the same I saw here the other day. Thinks they are here after acorns. He once caught seven summer ducks by baiting his steel traps with acorns under water. They dove for them, and he caught them by the neck. He saw yesterday a green chestnut bur on the Great Meadows (now bare), fifty rods from the Holt. Could not tell how it came there.

Am surprised to find an abundance of witch-hazel, now at the height of its change, where S. Wheeler cut off, at the bend of the Assabet. The tallest bushes are bare, though in bloom, but the lowest are full of leaves, many of them green, but chiefly clear and handsome yellow of various shades, from a pale lemon in the shade or within the bush to a darker and warmer yellow with-

out. Some are even a hue of crimson; some green, with bright yellow along the veins. This reminds me that, generally, plants exposed turn early, or not at all, while the same species in the shade of the woods at a much later date assume very pure and delicate tints, as more withdrawn from the light.

You notice now many faded, almost white dicksonia ferns, and some brakes about as white.

A great part of the pine-needles have just fallen. See the carpet of pale-brown needles under this pine. How light it lies up on the grass, and that great rock, and the wall, resting thick on its top and its shelves, and on the bushes and underwood, hanging lightly! They are not yet flat and reddish, but a more delicate pale brown, and lie up light as joggle-sticks just dropped. The ground is nearly concealed by them. How beautifully they die, making cheerfully their annual contribution to the soil! They fall to rise again; as if they knew that it was not one annual deposit alone that made this rich mould in which pine trees grow. They live in the soil whose fertility and bulk they increase, and in the forests that spring from it.

The leaves that were floating before the rain have now sunk to the bottom, being wetted above as well as below.

I see a delicate pale brown-bronze wood frog. I think I can always take them up in my hand. They, too, vary in color, like the leaves of many species of plants at present, having now more yellow, now more red; and perhaps for the same reason.

I saw some blackbirds, apparently grackles, singing,

after their fashion, on a tree by the river. Most had those grayish-brown heads and necks; some, at least, much ferruginous or reddish brown reflected. They were pruning themselves and splitting their throats in vain, trying to sing as the other day. All the melody flew off in splinters.[1] Also a robin sings once or twice, just as in spring!

I think that the principal stages in the autumnal changes of trees are these, thus far, as I remember, this year: —

First, there were in September the few prematurely blushing white maples, or blazing red ones in water, that reminded us of October. Next, the red maple swamps blazed out in all their glory, attracting the eyes of all travellers and contrasting with other trees. And hard upon these came the ash trees and yellowing birches, and walnuts, and elms, and the sprout-land oaks, the last streaking the hillsides far off, often occupying more commanding positions than the maples. All these add their fires to those of the maples. But even yet the summer is unconquered. Now the red maple fires are gone out (very few exceptions), and the brightness of those accompanying fires is dulled, their leaves falling; but a general, though duller, fire, yellowish or red, growing more reddish, has seized the masses of the forest, and betrays the paucity of the evergreens, but mingled with it are the delicate tints of aspens, etc., and, beneath, of protected underwoods whose exposed specimens gave us such promise.

What is acorn-color! Is it not as good as chestnut?[2]

[1] [Channing, p. 105.]

[2] [Channing, p. 106.]

Oct. 17. *Saturday.* Very high wind in the night, shaking the house. I feel it taking hold under the eaves, which project at the end of the house, each time with a jerk. Some rain also, and these two bring down the leaves. A great many more ash trees, elms, etc., are bare now.

What a new beauty the blue of the river acquires, seen at a distance in the midst of the various-tinted woods, great masses of red and yellow, etc.! It appears as color, which ordinarily it does not, — elysian.

The trainers are out with their band of music, and I find my account in it, though I have not subscribed for it. I am walking with a hill between me and the soldiers. I think, perhaps, it will be worth the while to keep within hearing of these strains this afternoon. Yet I hesitate. I am wont to find music unprofitable; it is a luxury. It is surprising, however, that so few habitually intoxicate themselves with music, so many with alcohol. I think, perchance, I may risk it, it will whet my senses so; it will reveal a glory where none was seen before. It is remarkable that men too must dress in bright colors and march to music once in the year. Nature, too, assumes her bright hues now, and think you a subtile music may not be heard amid the hills? No doubt these strains do sometimes suggest to Abner, walking behind in his red-streaked pants, an ideal which he had lost sight of, or never perceived. It is remarkable that our institutions can stand before music, it is so revolutionary.

P. M. — To Clintonia Swamp.

Glossy-brown white oak acorns strew the ground thickly, many of them sprouted. How soon they have sprouted! I find some quite edible, but they too, like

wild apples, require an outdoor appetite. I do not admit their palatableness when I try them in the house. Is not the outdoor appetite the one to be prayed for?

The cinnamon ferns surrounding the swamp have just lost their leafets, except the terminal ones. They have acquired their November aspect, and the wool now adheres to my clothes as I go through them. The protected ones are not yet bare. The dicksonia ferns are killed sere and brown where exposed, but in woods are still pretty green even, only some faded white. They grow in patches.

The swamp floor is covered with red maple leaves, many yellow with bright-scarlet spots or streaks. Small brooks are almost concealed by them. The *Lycopodium lucidulum* looks suddenly greener amid the withered leaves.[1]

It is cooler to-day, and a fire is necessary, which I have not had for about a week. The mountains are more distinct in the horizon, and as I come home the sunset sky is white and cold; recently it was a warm orange (?) tint.

Oct. 18. P. M. — To Conantum.

Clear and pleasant afternoon, but cooler than before. At the brook beyond Hubbard's Grove, I stand to watch the water-bugs (*Gyrinus*). The shallow water appears now more than usually clear there, as the weather is cooler, and the shadows of these bugs on the bottom, half a dozen times as big as themselves, are very distinct and interesting, with a narrow and well-defined

[1] [*Excursions*, p. 266; Riv. 326.]

halo about them. But why are they composed, as it were, of two circles run together, the foremost largest? Is it owing to the manner in which the light falls on their backs, in two spots? You think that the insect must be amused with this pretty shadow. I also see plainly the shadows of ripples they make, which are scarcely perceptible on the surface.

Many alders and birches just bare.

I should say that the autumnal change and brightness of foliage began fairly with the red maples (not to speak of a very few premature trees in water) September 25th, and ends this year, say generally October 22d, or maybe two or three days earlier. The fall of the leaf, in like way, began fairly with the fall of the red maple leaves, October 13th, and ended at least as early as when the pitch pines had *generally* fallen, November 5th (the larches are about a week later). The red maples are now fairly bare, though you may occasionally see one full of leaves.

So gradually the leaves fall, after all, — though individuals will be completely stripped in one short windy rain-storm, — that you scarcely miss them out of the landscape; but the earth grows more bare, and the fields more hoary, and the heavy shadows that began in June take their departure, November being at hand.

I go along the sunny west side of the Holden wood. Snakes lie out now on sunny banks, amid the dry leaves, now as in spring. They are chiefly striped ones. They crawl off a little into the bushes, and rest there half-concealed till I am gone.

The bass and the black ash are completely bare;

how long? Red cedar is fallen and falling. Looking across to the sprout-land beneath the Cliffs, I see that the pale brown of withered oak leaves begins to be conspicuous, amid the red, in sprout-lands.

In Lee's Wood, white pine leaves are now fairly fallen (not pitch pine yet), — a pleasant, soft, but slippery carpet to walk on. They sometimes spread leafy twigs on floors. Would not these be better? Where the pines stand far apart on grassy pasture hillsides, these tawny patches under each tree contrast singularly with the green around. I see them under one such tree completely and evenly covering and concealing the grass, and more than an inch deep, as they lie lightly. These leaves, like other, broader ones, pass through various hues (or shades) from green to brown, — first yellow, giving the tree that parti-colored look, then pale brown when they fall, then reddish brown after lying on the ground, and then darker and darker brown when decaying.

I see many robins on barberry bushes, probably after berries. The red oaks I see to-day are full of leaves, — a brownish yellow (with more or less green, but no red or scarlet). I find an abundance of those small, densely clustered grapes, — not the smallest quite, — still quite fresh and full on green stems, and leaves crisp but not all fallen; so much later than other grapes, which were further advanced October 4th when it was too late to get many. These are not yet ripe and may fairly be called frost grapes. Half-way up Blackberry Steep, above the rock. The huckleberries on Conantum appear to have been softened and spoilt by

the recent rain, for they are quite thick still on many bushes. Their leaves have fallen. So many leaves have now fallen in the woods that a squirrel cannot run after a nut without being heard.

As I was returning over Hubbard's stump fence pasture, I heard some of the common black field crickets [1] (three quarters of an inch long), two or three rods before me, make, as I thought, a peculiar shrilling, like a clear and sharp twittering of birds, [so] that I looked up for some time to see a flock of small birds going over, but they did not arrive. These fellows were, one or two, at the mouth of their burrows, and as I stood over one I saw how he produced the sound, by very slightly lifting his wing-cases (if that is the name of them), and shuffling them (transversely of course) over each other about an eighth of an inch, perhaps three or four times, and then stopping. Thus they stand at the mouths of their burrows, in the warm pastures, near the close of the year, shuffling their wing-cases over each other (the males only), and produce this sharp but pleasant creaking sound, — helping to fetch the year about. Thus the sounds of human industry and activity — the roar of cannon, blasting of rocks, whistling of locomotives, rattling of carts, tinkering of artisans, and voices of men — may sound to some distant ear like an earth-song and the creaking of crickets. The crickets keep about the mouths of their burrows as if apprehending cold.

The fringed gentian closes every night and opens every morning in my pitcher.

[1] *Acheta abbreviata.*

Oct. 19. Mr. Sanborn tells me that he looked off from Wachusett last night, and that he saw the shadow of the mountain gradually extend itself eastward not only over the earth but finally *on to the sky* in the horizon. Thought it extended as much as two diameters of the moon on to the sky, in a small cone. This was like the spectre of the Brocken.

Harris says the crickets produce their shrilling by shuffling their wing-covers together *lengthwise*. I should have said it was sidewise, or transversely to the insect's length, as I looked down on it. You may see these crickets now everywhere in the ruts, as in the cross-road from the Turnpike to the Great Road, creeping along, or oftenest three or four together, absorbed in feeding on, *i. e.* sucking the juices of, a crushed companion. There are two broad ruts made by ox-carts loaded with muck, and a cricket has been crushed or wounded every four or five feet in each. It is one long slaughter-house. But as often as a cart goes by, the survivors each time return quickly to their seemingly luscious feast. At least two kinds there.

Oct. 20. P. M. — To the Easterbrooks Country.

I go along the riverside and by Dakin the pump-maker's. There is a very strong northwest wind, Novemberish and cool, raising waves on the river and admonishing to prepare for winter.

I see two *Chenopodium album* with stems as bright purple and fair as the poke has been, and the calyx-lobes enveloping the seeds the same color.

Apples are gathered; only the ladders here and there, left leaning against the trees.

I had gone but little way on the old Carlisle road when I saw Brooks Clark, who is now about eighty and bent like a bow, hastening along the road, barefooted, as usual, with an axe in his hand; was in haste perhaps on account of the cold wind on his bare feet. It is he who took the *Centinel* so long. When he got up to me, I saw that besides the axe in one hand, he had his shoes in the other, filled with knurly apples and a dead robin. He stopped and talked with me a few moments; said that we had had a noble autumn and might now expect some cold weather. I asked if he had found the robin dead. No, he said, he found it with its wing broken and killed it. He also added that he had found some apples in the woods, and as he had n't anything to carry them in, he put 'em in his shoes. They were queer-looking trays to carry fruit in. How many he got in along toward the toes, I don't know. I noticed, too, that his pockets were stuffed with them. His old tattered frock coat was hanging in strips about the skirts, as were his pantaloons about his naked feet. He appeared to have been out on a scout this gusty afternoon, to see what he could find, as the youngest boy might. It pleased me to see this cheery old man, with such a feeble hold on life, bent almost double, thus enjoying the evening of his days. Far be it from me to call it avarice or penury, this childlike delight in finding something in the woods or fields and carrying it home in the October evening, as a trophy to be added to his winter's store. Oh, no;

he was happy to be Nature's pensioner still, and bird-like to pick up his living. Better his robin than your turkey, his shoes full of apples than your barrels full; they will be sweeter and suggest a better tale. He can afford to tell how he got them, and we to listen. There is an old wife, too, at home, to share them and hear how they were obtained. Like an old squirrel shuffling to his hole with a nut. Far less pleasing to me the loaded wain, more suggestive of avarice and of spiritual penury.

This old man's cheeriness was worth a thousand of the church's sacraments and *memento mori*'s. It was better than a prayerful mood. It proves to me old age as tolerable, as happy, as infancy. I was glad of an occasion to suspect that this afternoon he had not been at "work" but living somewhat after my own fashion (though he did not explain the axe), — had been out to see what nature had for him, and now was hastening home to a burrow he knew, where he could warm his old feet. If he had been a young man, he would probably have thrown away his apples and put on his shoes when he saw me coming, for shame. But old age is manlier; it has learned to live, makes fewer apologies, like infancy. This seems a very manly man. I have known him within a few years building stone wall by himself, barefooted. I keep along the old Carlisle road. The leaves having mostly fallen, the country now seems deserted, and you feel further from home and more lonely. I see where squirrels, apparently, have gnawed the apples left in the road. The barberry bushes are now alive with, I should say, thousands

of robins feeding on them. They must make a principal part of their food now. I see the yellowish election-cake fungi. Those large chocolate-colored ones have been burst some days (at least).

Warren Brown, who owns the Easterbrooks place, the west side the road, is picking barberries. Allows that the soil thereabouts is excellent for fruit, but it is so rocky that he has not patience to plow it. That is the reason this tract is not cultivated. The yellow birches are generally bare. The sassafras in Sted Buttrick's pasture near to E. Hubbard's Wood, nearly so; leaves all withered. Much or most of the fever-bush still green, though somewhat wrinkled.[1]

There was Melvin, too, a-barberrying and nutting. He had got two baskets, one in each hand, and his game-bag, which hung from his neck, all full of nuts and barberries, and his mouth full of tobacco. Trust him to find where the nuts and berries grow. He is hunting all the year and he marks the bushes and the trees which are fullest, and when the time comes, for once leaves his gun, though not his dog, at home, and takes his baskets to the spot. It is pleasanter to me to meet him with his gun or with his baskets than to meet some portly caterer for a family, basket on arm, at the stalls of Quincy Market. Better Melvin's pignuts than the others' shagbarks. It is to be observed that the best things are generally most abused, and so are not so much enjoyed as the worst. Shagbarks are eaten by epicures with diseased appetites; pignuts by the country boys who gather them. So

[1] Fever-bush in '61, Oct. 9th, at height of change!!

fagots and rubbish yield more comfort than sound wood.

Melvin says he has caught partridges in his hands. If there's only one hole, knows they've not gone out. Sometimes shoots them through the snow.

What a wild and rich domain that Easterbrooks Country! Not a cultivated, hardly a cultivatable field in it, and yet it delights all natural persons, and feeds more still. Such great rocky and moist tracts, which daunt the farmer, are reckoned as unimproved land, and therefore worth but little; but think of the miles of huckleberries, and of barberries, and of wild apples, so fair, both in flower and fruit, resorted to by men and beasts; Clark, Brown, Melvin, and the robins, these, at least, were attracted thither this afternoon. There are barberry bushes or clumps there, behind which I could actually pick two bushels of berries without being seen by you on the other side. And they are not a quarter picked at last, by all creatures together. I walk for two or three miles, and still the clumps of barberries, great sheaves with their wreaths of scarlet fruit, show themselves before me and on every side, seeming to issue from between the pines or other trees, as if it were they that were promenading there, not I.

That very dense and handsome maple and pine grove opposite the pond-hole on this old Carlisle road is Ebby Hubbard's.[1] Melvin says there are those alive who remember mowing there. Hubbard loves to come with his axe in the fall or winter and trim up his woods.

[1] Sted Buttrick's, according to Melvin.

In the Easterbrooks Country

tering there, as if they would come in, or alight on the wood-pile or pump. They would commonly be mistaken for sparrows, but show more white when they fly, beside the yellow on the rump and sides of breast seen near to and two white bars on the wings. Chubby birds.

P. M. — Up Assabet.

Cool and windy. Those who have put it off thus long make haste now to collect what apples were left out and dig their potatoes before the ground shall freeze hard. Now again, as in the spring, we begin to look for sheltered and sunny places where we may sit.

I see, hanging over an alder bough above the hemlocks, five inches above the water, a great eel, over two feet long and two inches wide or thick horizontally (more vertically) in the forward part of its body. It must weigh two and a half pounds; the biggest I ever saw. What a repulsive and gluttonous-looking creature, with its vomer made to plow the mud and wallow in filth, and its slimy skin (I had forgotten it was scaly, it is so fine). It was somewhat bloated, perhaps, and its skin distended, but at any rate it had got its skin full. It is more repulsive to me than a snake, and I think must be less edible. Its dead-white eye-spots — for the eyes were closed flat on its black and shiny vomer — and the fringed gelatinous kind of alga or what-not that covered like a lichen the parts submerged made it yet more repulsive.

I cannot go by a large dead swamp white oak log this cool evening, but with no little exertion get it aboard, and some blackened swamp white oak stumps, whose

earthy parts are all gone. I see a robin eating prinos berries. Is not the robin the principal berry-eating bird nowadays? There must be more about the barberry bushes in Melvin's Preserve than anywhere.

As I am paddling home swiftly before the northwest wind, absorbed in my wooding, I see, this cool and grayish evening, that peculiar yellow light in the east, from the sun a little before its setting. It has just come out beneath a great cold slate-colored cloud that occupies most of the western sky, as smaller ones the eastern, and now its rays, slanting over the hill in whose shadow I float, fall on the eastern trees and hills with a thin yellow light like a clear yellow wine, but somehow it reminds me that now the hearth-side is getting to be a more comfortable place than out-of-doors. Before I get home the sun has set and a cold white light in the west succeeded.

I saw wood tortoises coupled, up the Assabet, the back of the upper above water. It held the lower with its claws about the head, and they were not to be parted.

It is pitiful to see a man of sixty, a philosopher, perchance, inquiring for a bearing apple orchard for sale. If he must have one, why did he not set it out when he was thirty? How mean and lazy, to be plucking the fruit of another man's labor. The old man I saw yesterday lives on peaches and milk in their season, but then he planted them.

Is not the poet bound to write his own biography? Is there any other work for him but a good journal? We do not wish to know how his imaginary hero, but how he, the actual hero, lived from day to day.

That big swamp white oak limb or tree which I found prostrate in the swamp was longer than my boat and tipped it well. One whole side, the upper, was covered with green hypnum, and the other was partly white with fungi. That green coat adhered when I split it. Immortal wood! that had begun to live again. Others burn unfortunate trees that lose their lives prematurely. These old stumps stand like anchorites and yogees, putting off their earthy garments, more and more sublimed from year to year, ready to be translated, and then they are ripe for my fire. I administer the last sacrament and purification. I find old pitch pine sticks which have lain in the mud at the bottom of the river, nobody knows how long, and weigh them up, — almost as heavy as lead, — float them home, saw and split them. Their pitch, still fat and yellow, has saved them for me, and they burn like candles at last. I become a connoisseur in wood at last, take only the best.

Oct. 22. 6 A. M. — To Hill.

Ground pretty white with frost. The stiffened and frosted weeds and grass have an aggrieved look. The lately free-flowing blades of grass look now like mourning tresses sculptured stiffly in marble; they lie stiff and dishevelled. A very narrow strip of ice has formed along the riverside, in which I see a pad or two, wearing the same aggrieved look, like the face of the child that cried for spilt milk, its summer irrevocably gone. Going through the stiff meadow-grass, I collect the particles of white frost on the top of my shoes. Under

the ash trees their peculiar club-shaped leaf-stems thickly strew the ground. The bright tints of autumn are now fairly and generally over. Perhaps the brightest *trees* I see this moment are some aspens. Large oaks are already generally brown. Reddish brown is the prevailing color of deciduous woods. The swamp white oaks are greener than the rest yet. The black willows along the river are about as bare as in November. The button-bushes are completely bare, letting in more light to the water, and these days I see on their stems the ribbed reflections of the waves I have made. Blackbirds go over, chattering, and a small hawk — pigeon or sparrow — glides along and alights on an elm.

P. M. — To and round Flint's Pond.

Crossing my old bean-field, I see the blue pond between the green white pines in the field and am reminded that we are almost reduced to the russet (*i. e.* pale-brown grass tinged with red blackberry vines) of such fields as this, the blue of water, the green of pines, and the dull reddish brown of oak leaves. The sight of the blue water between the now perfectly green white pines, seen over the light-brown pasture, is peculiarly Novemberish, though it may be like this in early spring.

As I go through the woods now, so many oak and other leaves have fallen the rustling noise somewhat disturbs my musing. However, Nature in this may have intended some kindness to the ducks, which are now loitering hereabouts on their migration south-

ward, mostly young and inexperienced birds, for, as they are feeding [in] Goose Pond, for instance, the rustling of the leaves betrays the approach of the sportsman and his dog, or other foe; so perhaps the leaves on the ground protect them more than when on the trees.

There is scarcely a square rod of sand exposed, in this neighborhood, but you may find on it the stone arrowheads of an extinct race. Far back as that time seems when men went armed with bows and pointed stones here, yet so numerous are the signs of it. The finer particles of sand are blown away and the arrow-point remains. The race is as clean gone — from here — as this sand is clean swept by the wind. Such are our antiquities. These were our predecessors. Why, then, make so great ado about the Roman and the Greek, and neglect the Indian? We [need] not wander off with boys in our imaginations to Juan Fernandez, to wonder at footprints in the sand there. Here is a print still more significant at our doors, the print of a race

that has preceded us, and this the little symbol that Nature has transmitted to us. Yes, *this* arrow-headed character is probably more ancient than any other, and to my mind it has not been deciphered. Men should not go to New Zealand to write or think of Greece and Rome, nor more to New England. New earths, new themes expect us. Celebrate not the Garden of Eden, but your own.

I see what I call a hermit thrush on the bushes by

the shore of Flint's Pond; pretty tame. It has an olive-brown back, with a more ferruginous tail, which [is] very narrowly tipped with whitish; an apparently cream-colored throat; and dusky cream-color beneath. The breast is richly spotted with black. The legs are flesh-colored and transparent; the bill black. Yet Wilson says the legs are dusky. Can it be the *Turdus olivaceus* of Giraud?

Chestnut trees are almost bare. Now is just the time for chestnuts. The white oak generally withers earlier than other large oaks. On the north side of the chestnut oak hill, in the woods, I see a scarlet oak and even a white one, still almost entirely green! The chestnut oak there is also generally green still, some leaves turned yellow-brown and withering so.

Look from the high hill, just before sundown, over the pond. The mountains are a mere cold slate-color. But what a perfect crescent of mountains we have in our northwest horizon! Do we ever give thanks for it? Even as pines and larches and hemlocks grow in communities in the wilderness, so, it seems, do mountains love society and form a community in the horizon. Though there may be two or more ranges, one behind the other, and ten or twelve miles between them, yet if the farthest are the highest, they are all seen as one group at this distance. I look up northwest toward my mountains, as a farmer to his hill lot or rocky pasture from his door. I drive no cattle to Ipswich hills. I own no pasture for them there. My eyes it is alone that wander to those blue pastures, which no drought affects. They are my flocks and herds. See how they

look. They are shaped like tents, inclining to sharp peaks. What is it lifts them upward so? Why not rest level along the horizon? They seem not perfect, they seem not satisfied, until their central parts have curved upward to a sharp summit. They are a succession of pickets with scallops between. That side my pasture is well fenced. This being their upper side, I fancy they must have a corresponding under side and roots also. Might they not be dug up like a turnip? Perhaps they spring from seeds which some wind sowed. Can't the Patent Office import some of the seed of Himmaleh with its next rutabagas? Spore of mountains has fallen there; it came from the gills of an agaric. Ah, I am content to dwell there and see the sun go down behind my mountain fence.

It is just about nine miles, as I walk, from here around Flint's Pond.

The hickory leaves, now after they have fallen, are often if not oftenest a dark rich yellow, very conspicuous upon the brown leaves of the forest floor, seeming to have more life in them than those leaves which are brown. I saw some hickory sprouts above the perfoliate bellwort near the pond, with very large leaves. One of five leafets had the terminal one fourteen inches long by ten and three quarters wide, and the general leaf-stalk was ten and a half inches long.

The leaf-stalk commonly adheres to the leaf when fallen, but in the case of the ash, hickory, and probably other compound leaves, it separates from them and by its singular form puzzles the uninitiated.

What a perfect chest the chestnut is packed in! I

now hold a green bur in my hand which, round, must have been two and a quarter inches in diameter, from which three plump nuts have been extracted. It has a straight, stout stem three sixteenths of an inch in diameter, set on strongly and abruptly. It has gaped in four segments or quarters, revealing the thickness of its walls, from five eighths to three quarters of an inch. With such wonderful care Nature has secluded and defended these nuts, as if they were her most precious fruits, while diamonds are left to take care of themselves. First it bristles all over with sharp green prickles, some nearly half an inch long, like a hedgehog rolled into a ball; these rest on a thick, stiff, bark-like rind, one sixteenth to one eighth of an inch thick, which, again, is most daintily lined with a kind of silvery fur or velvet plush one sixteenth of an inch thick, even rising in a ridge between the nuts, like the lining of a casket in which the most precious commodities are kept. I see the brown-spotted white cavities where the bases of the nuts have rested and sucked up nourishment from the stem. The little stars on the top of the nuts are but shorter and feebler spines which mingle with the rest. They stand up close together, three or more, erecting their tiny weapons, as an infant in the brawny arms of its nurse might put out its own tiny hands, to fend off the aggressor. There is no waste room. The chest is packed quite full; half-developed nuts are the waste paper used in the packing, to fill the vacancies. At last Frost comes to unlock this chest; it alone holds the true key. Its lids straightway gape open, and the October air rushes in, dries the ripe

nuts, and then with a ruder gust shakes them all out in a rattling shower down upon the withered leaves.

Such is the cradle, thus daintily lined, in which they have been rocked in their infancy. With what steadiness the nuts must be held within these stout arms, — there can be no motion on their base, — and yet how tenderly, by a firm hold that relaxes only as they grow, the walls that confine them, superfluously strong as they seem, expanding as they grow!

The chestnut, with its tough shell, looks as if it were able to protect itself, but see how tenderly it has been reared in its cradle before its green and tender skin hardened into a shell. The October air comes in, as I have said, and the light too, and proceed to paint the nuts that clear, handsome reddish (?) brown which we call chestnut. Nowadays the brush that paints chestnuts is very active. It is entering into every open bur over the stretching forests' tops for hundreds of miles, without horse or ladder, and putting on rapid coats of this wholesome color. Otherwise the boys would not think they had got perfect nuts. And that this may be further protected, perchance, both within the bur and afterward, the nuts themselves are partly covered toward the top, where they are first exposed, with that same soft velvety down. And then Nature drops it on the rustling leaves, a *done* nut, prepared to begin a chestnut's course again. Within itself, again, each individual nut is lined with a reddish velvet, as if to preserve the seed from jar and injury in falling and, perchance, from sudden damp and cold, and, within that, a thin white skin enwraps the germ. Thus it is lining

within lining and unwearied care, — not to count closely, six coverings at least before you reach the contents!

But it is a barbarous way to jar the tree, and I trust I do repent of it. Gently shake it only, or let the wind shake it for you. You are gratified to find a nut that has in it no bitterness, altogether palatable.

Oct. 23. P. M. — Up Assabet.

The ferns which I can see on the bank, apparently all evergreens, are polypody at rock, marginal shield fern, terminal shield fern, and (I think it is) *Aspidium spinulosum*, which I had not identified. Apparently *Aspidium cristatum* elsewhere.[1]

I can find no bright leaves now in the woods. Witch-hazel, etc., are withered, turned brown, or yet green. See by the droppings in the woods where small migrating birds have roosted.

I see a squirrel's nest in a white pine, recently made, on the hillside near the witch-hazels.

The high bank-side is mostly covered with fallen leaves of pines and hemlocks, etc. The above-named evergreen ferns are so much the more conspicuous on that pale-brown ground. They stand out all at once and are seen to be evergreen; their character appears. The fallen pine-needles, as well as other leaves, now actually paint the surface of the earth brown in the woods, covering the green and other colors, and the few evergreen plants on the forest floor stand out distinct and have a rare preëminence.

Sal Cummings, a thorough countrywoman, conversant

[1] *Vide* pp. [134] and [149].

with nuts and berries, calls the soapwort gentian "blue vengeance," mistaking the word. A masculine wild-eyed woman of the fields. Somebody has her daguerreotype. When Mr. —— was to lecture on Kansas, she was sure "she wa'n't going to hear him. None of her folks had ever had any."

Oct. 24. P. M. — To Smith's chestnut grove.

Rain last night, raising the springs a little. To-day and yesterday still, gray days, but not cold. The sugar maple leaves are now falling fast.

I get a couple of quarts of chestnuts by patiently brushing the thick beds of leaves aside with my hand in successive concentric circles till I reach the trunk; more than half under one tree. I believe I get more by resolving, where they are reasonably thick, to pick all under one tree first. Begin at the tree and brush the leaves with your right hand in toward the stump, while your left holds the basket, and so go round and round it in concentric circles, each time laying bare about two feet in width, till you get as far as the boughs extend. You may presume that you have got about all then. It is best to reduce it to a system. Of course you will shake the tree first, if there are any on it. The nuts lie commonly two or three together, as they fell.

I find on a chestnut tree, while shaking it, fifteen or twenty feet high, on the bark of the trunk, a singular green kind of slug nearly half an inch long, of this form, and about three sixteenths high from the paper up, narrower on back, as appears in sketch; a brown mark across middle of

back and near tail as drawn (only full). It can elongate itself and also run out its head a little from beneath this soft kind of shell. Beneath, quite flat and fleshy-ribbed. Climbs up glass slowly but easily. Reminds me of a green beechnut, but flat-backed. Would hardly suspect it to have life at first sight. Sticks very firmly to the bark or glass; hard to be pushed aside.

I find one of those small, hard, dark-brown millipede worms partly crawled into a hole in a chestnut.

I read of an apple tree in this neighborhood that had blossomed again about a week ago.

I find my account in this long-continued monotonous labor of picking chestnuts all the afternoon, brushing the leaves aside without looking up, absorbed in that, and forgetting better things awhile. My eye is educated to discover anything on the ground, as chestnuts, etc. It is probably wholesomer to look at the ground much than at the heavens. As I go stooping and brushing the leaves aside by the hour, I am not thinking of chestnuts merely, but I find myself humming a thought of more significance. This occupation affords a certain broad pause and opportunity to start again afterward, — turn over a new leaf.

I hear the dull thump of heavy stones against the trees from far through the rustling wood, where boys are ranging for nuts.

Oct. 25. Rain in night.

P. M. — By boat to Battle-Ground.

A rainy day and easterly wind, — an easterly storm.

I see flying very high over the meadow, from the east, eleven large birds, leisurely circling a little by the way, surveying the bare meadow. I think they must be fish hawks.

I am amused to see that Varro tells us that the Latin *e* represents the vowel sound in the bleat of a sheep (*Bee*). If he had said in any word pronounced by the Romans we should be not the wiser, but we do not doubt that sheep bleat to-day as they did then.

The fresh clamshells opened by the musquash begin to be conspicuous.

Oct. 26. Hard rain in the night and almost steady rain through the day, the second day. Wind still easterly or northeasterly.

P. M. — Round by Puffer's *via* Clamshell.

A driving east or northeast storm. I can see through the drisk only a mile. The river is getting partly over the meadows at last, and my spirits rise with it. Methinks this rise of the waters must affect every thought and deed in the town. It qualifies my sentence and life. I trust there will appear in this Journal some flow, some gradual filling of the springs and raising of the streams, that the accumulating grists may be ground. A storm is a new, and in some respects more active, life in nature. Larger migrating birds make their appearance. They, at least, sympathize with the movements of the watery element and the winds. I see two great fish hawks (*possibly* blue herons) slowly beating northeast against the storm, by what a curious tie circling ever near each other and in the same direction,

as if you might expect to find the very motes in the air to be paired; two long undulating wings conveying a feathered body through the misty atmosphere, and this inseparably associated with another planet of the same species. I can just glimpse their undulating lines. Damon and Pythias they must be. The waves beneath, which are of kindred form, are still more social, multitudinous, *ἀνήριθμον*. Where is my mate, beating against the storm with me? They fly according to the valley of the river, northeast or southwest.

I start up snipes also at Clamshell Meadow. This weather sets the migratory birds in motion and also makes them bolder.

These regular phenomena of the seasons get at last to be — they were *at first*, of course — simply and plainly phenomena or phases of my life. The seasons and all their changes are in me. I see not a dead eel or floating snake, or a gull, but it rounds my life and is like a line or accent in its poem. Almost I believe the Concord would not rise and overflow its banks again, were I not here. After a while I learn what my moods and seasons are. I would have nothing subtracted. I can imagine nothing added. My moods are thus periodical, not two days in my year alike. The perfect correspondence of Nature to man, so that he is at home in her!

Going along the road toward the bæomyces, I see, as I think, a space a yard or two square where the bank has been [burnt] over by accident, by some traveller or sportsman. Even as I stand within four or five feet I take it to be so. It was the fallen leaves of the

Salix tristis, thickly covering the ground, so black, with an ashy reflection, that they look exactly like cinders of leaves. And the small twigs were also blackened and inconspicuous; I could hardly detect them. Just the right mingling of black and ash-color. It was a wet day, which made them look blacker. Mere evergreen mossy banks, as that by this road in the woods, now more attract us when greenness is so rare.

At the hewing-place on the flat above, many sparrows are flitting past amid the birches and sallows. They are chiefly *Fringilla hyemalis*. How often they may be [seen] thus flitting along in a straggling manner from bush to bush, so that the hedgerow will be all alive with them, each uttering a faint *chip* from time to time, as if to keep together, bewildering you so that you know not if the greater part are gone by or still to come. One rests but a moment on the tree before you and is gone again. You wonder if they know whither they are bound, and how their leader is appointed.

The pitch pine leaves not yet quite fallen. Yellowish leaves still adhere to the very tops of the birches.

Those sparrows, too, are thoughts I have. They come and go; they flit by quickly on their migrations, uttering only a faint *chip*, I know not whither or why exactly. One will not rest upon its twig for me to scrutinize it. The whole copse will be alive with my rambling thoughts, bewildering me by their very multitude, but they will be all gone directly without leaving me a feather. My loftiest thought is somewhat like an eagle that suddenly comes into the field of view, sug-

gesting great things and thrilling the beholder, as if it were bound hitherward with a message for me; but it comes no nearer, but circles and soars away, growing dimmer, disappointing me, till it is lost behind a cliff or a cloud.

Spring is brown; summer, green; autumn, yellow; winter, white; November, gray.

Oct. 27. P. M. — Up river.

The third day of steady rain; wind northeast. The river has now risen so far over the meadows that I can *just* cross Hubbard's Great Meadow in my boat.

Stedman Buttrick tells me that a great many ducks and large yellow-legs have been killed within a day or two. It is rather late for ducks generally. He says that the spruce swamp beyond Farmer's is called Fox Castle Swamp and has been a great place for foxes. Some days ago he was passing under a black oak on his land, when he saw the *dust* of acorn shells (or cups?) falling about him. Looking up, he saw as many as twenty (!) striped squirrels busily running out to ends of the twigs, biting off the nuts, running back and taking off the shells (cups?) and stowing the nuts away in their cheeks.

I go up the river as far as Hubbard's Second Grove, in order to share the general commotion and excitement of the elements, — wind and waves and rain. A half-dozen boats at the landing were full, and the waves beating over them. It was hard work getting at and hauling up and emptying mine. It was a rod and a half from the water's edge. Now look out for your rails

and other fencing-stuff and loose lumber, lest it be floated off. I sailed swiftly, standing up and tipping my boat to make a keel of its side, though at first it was hard to keep off a lee shore. I looked for cranberries drifted up on the lee side of the meadows, but saw few. It was exciting to feel myself tossed by the dark waves and hear them surge about me. The reign of water now begins, and how it gambols and revels! Waves are its leaves, foam its blossoms. How they run and leap in great droves, deriving new excitement from each other! Schools of porpoises and blackfish are only more animated waves and have acquired the gait and game of the sea itself. The high wind and the dashing waves are very inspiriting. The clumps of that "west of rock" willow and a *discolor* are still thinly leaved, with peculiar silvery-yellow leaves in this light. The rising water is now rolling and washing up the river wreck of sparganium, etc., etc. Wool-grass tops appear thickly above the flood.

When I turn about, it requires all my strength and skill to push the boat back again. I must keep it pointed directly in the teeth of the wind. If it turns a little, the wind gets the advantage of me and I lose ground. The wind being against the stream makes it rise the faster, and also prevents the driftwood from coming down. How many a meadow my boat's bottom has rubbed over! I might perhaps consult with it respecting cranberry vines, cut-grass, pitcher-plant, etc., etc. I hear that Sammy Hoar saw geese go over to-day.

The fall (strictly speaking) is approaching an end in this probably annual northeast storm. Thus the

summer winds up its accounts. The Indians, it is said, did not look for winter till the springs were full. Long-continued rain and wind come to settle the accounts of the year, filling the springs for winter. The ducks and other fowl, reminded of the lateness thus, go by. The few remaining leaves come fluttering down. The snow-flea (as to-day) is washed out of the bark of meadow trees and covers the surface of the flood. The winter's wood is bargained for and being hauled. This storm reminds men to put things on a winter footing. There is not much more for the farmer to do in the fields.

The real facts of a poet's life would be of more value to us than any work of his art. I mean that the very scheme and form of his poetry (so called) is adopted at a sacrifice of vital truth and poetry. Shakespeare has left us his fancies and imaginings, but the truth of his life, with its becoming circumstances, we know nothing about. The writer is reported, the liver not at all. Shakespeare's house! how hollow it is! No man can conceive of Shakespeare in that house. But we want the basis of fact, of an actual life, to complete our Shakespeare, as much as a statue wants its pedestal. A poet's life with this broad actual basis would be as superior to Shakespeare's as a lichen, with its base or thallus, is superior in the order of being to a fungus.

The Littleton Giant brought us a load of coal within the week. He appears deformed and weakly, though naturally well formed. He does not nearly stand up straight. His knees knock together; they touch when

he is standing most upright, and so reduce his height at least three inches. He is also very round-shouldered and stooping, probably from the habit of crouching to conceal his height. He wears a low hat for the same purpose. The tallest man looks like a boy beside him. He has a seat to his wagon made on purpose for him. He habitually stops before all doors. You wonder what his horses think of him, — that a strange horse is not afraid of him. His voice is deep and full, but mild, for he is quite modest and retiring, — really a worthy man, 't is said. Pity he could n't have been undertaken by a committee in season and put through, like the boy Safford, been well developed bodily and also mentally, taught to hold up his head and not mind people's eyes or remarks. It is remarkable that the giants have never correspondingly great hearts.

Oct. 28. P. M. — To Conantum.

To-day it does not rain, but is cloudy all the day. Large oak leaves have been falling for a week at least, but the oaks are not yet reduced to their winter state. On the causeway I see fox-colored sparrows flitting along in the willows and alders, uttering a faint *cheep*, and tree sparrows with them. On a black willow, a single grackle with *the bright iris*. (I doubt if some of the brown-headed blackbirds I have seen within three weeks *were* grackles.)

As I sat at the wall-corner, high on Conantum, the sky generally covered with continuous cheerless-looking slate-colored clouds, except in the west, I saw, through the hollows of the clouds, here and there the

blue appearing. All at once a low-slanted glade of sunlight from one of heaven's west windows behind me fell on the bare gray maples, lighting them up with an incredibly intense and pure white light; then, going out there, it lit up some white birch stems south of the pond, then the gray rocks and the pale reddish young oaks of the lower cliffs, and then the very pale brown meadow-grass, and at last the brilliant white breasts of two ducks, tossing on the agitated surface far off on the pond, which I had not detected before. It was but a transient ray, and there was no sunshine afterward, but the intensity of the light was surprising and impressive, like a halo, a glory in which only the just deserved to live.

It was as if the air, purified by the long storm, reflected these few rays from side to side with a complete illumination, like a perfectly polished mirror, while the effect was greatly enhanced by the contrast with the dull dark clouds and sombre earth. As if Nature did not dare at once to let in the full blaze of the sun to this combustible atmosphere. It was a serene, elysian light, in which the deeds I have dreamed of but not realized might have been performed. At the eleventh hour, late in the year, we have visions of the life we might have lived. No perfectly fair weather ever offered such an arena for noble acts. It was such a light as we behold but dwell not in! In each case, every recess was filled and lit up with this pure white light. The maples were Potter's, far down stream, but I dreamed I walked like a liberated spirit in their maze. The withered meadow-grass was as soft and glorious

as paradise. And then it was remarkable that the light-giver should have revealed to me, for all life, the heaving white breasts of those two ducks within this glade of light. It was extinguished and relit as it travelled.

Tell me precisely the value and significance of these transient gleams which come sometimes at the end of the day, before the close of the storm, final dispersion of the clouds, too late to be of any service to the works of man for the day, and notwithstanding the whole night after may be overcast! Is not this a language to be heard and understood? There is, in the brown and gray earth and rocks, and the withered leaves and bare twigs at this season, a purity more correspondent to the light itself than summer offers.

These two ducks, as near as I could see with my glass, were all dark above, back and wings, but had bright white breasts and necks. They were swimming and tacking about in the midst of the pond, with their heads half the time plunged beneath the surface. Were they grebes? or young sheldrakes? Even at this distance they warily withdraw still further off till I am gone.

Both aspleniums and the small botrychium are still fresh, as if they were evergreen. The latter sheds pollen. The former are most fresh under the shelter of rocks.

I look up and see a male marsh hawk with his clean-cut wings, that has just skimmed past above my head, — not at all disturbed, only tilting his body a little, now twenty rods off, with demi-semi-quaver of his wings. He is a very neat flyer. Again, I hear the scream

of a hen-hawk, soaring and circling onward. I do not often see the marsh hawk thus. What a regular figure this fellow makes on high, with his broad tail and broad wings! Does he perceive me, that he rises higher and circles to one side? He goes round now one full circle without a flap, tilting his wing a little; then flaps three or four times and rises higher. Now he comes on like a billow, screaming. Steady as a planet in its orbit, with his head bent down, but on second thought that small sprout-land seems worthy of a longer scrutiny, and he gives one circle backward over it. His scream is somewhat like the whinnering of a horse, if it is not rather a *split squeal*. It is a hoarse, tremulous breathing forth of his winged energy. But why is it so regularly repeated at that height? Is it to scare his prey, that he may see by its motion where it is, or to inform its mate or companion of its whereabouts? Now he crosses the at present broad river steadily, deserving to have one or two rabbits at least to swing about him. What majesty there is in this small bird's flight! The hawks are large-souled.

Those late grapes on Blackberry Steep are now as ripe as ever they will be. They are sweet and shrivelled but on the whole poor. They ripen there the latter part of October.

The white pine needles on the ground are already turned considerably redder. The pitch pines, which are yellower than the white when they fall, are three quarters fallen. I see some which look exactly like bamboo, very prettily barred with brown every tenth of an inch or so.

Going up the cliffy hillside, just north of the witch-hazel, I see a vigorous young apple tree, which, planted by birds or cows, has shot up amid the rocks and woods, and has much fruit on it and more beneath it, uninjured by the frosts, now when all other fruits are gathered. It is of a rank, wild growth, with many green leaves on it still, and makes an impression, at least, of thorniness. The fruit is hard and green, but looks like palatable winter fruit; some dangling on the twigs, but more half buried in the wet leaves, or rolled far down the hill amid the rocks. The owner, Lee, knows nothing of it. There is no hand to pluck its fruit; it is only gnawed by squirrels, I perceive. It has done double duty, — not only borne this crop, but each twig has grown a foot into the air. And this is such a fruit! Bigger than *many* berries, and carried home will be sound and palatable, perchance, next spring. Who knows but this chance wild fruit may be equal to those kinds which the Romans and the English have so prized, — may yet become the favorite of the nations? When I go by this shrub, thus late and hardy, and its dangling fruit strikes me, I respect the tree and am grateful for Nature's bounty.

Even the sourest and crabbedest apple, growing in the most unfavorable position, suggests such thoughts as these, it [is] so noble a fruit. Planted by a bird on a wild and rocky hillside, it bears a fruit, perchance, which foreign potentates shall hear of and send for, though the virtues of the owner of the soil may never be heard of beyond the limits of his village. It may be the choicest fruit of its kind. Every wild apple

shrub excites our expectation thus. It is a prince in disguise, perhaps.[1]

There is, apparently, limestone just above this apple tree.

I see pignuts which squirrels have industriously gnawed, the thick rind closely adhering, so that at last they are left brown and very rough; but in no case is the shell cut quite through, for, as I find, they contain no meat, but, under a shell of double thickness, a mere dry brown skin, and it seems the squirrels knew this!

Is that small fern (still partly green) *Aspidium cristatum*, at Lee's Cliff, northwest of the witch-hazel?

Suppose I see a single green apple, brought to perfection on some thorny shrub, far in a wild pasture where no cow has plucked it. It is an agreeable surprise. What chemistry has been at work there? It affects me somewhat like a work of art. I see some shrubs which cattle have browsed for twenty years, keeping them down and compelling them to spread, until at last they are so broad they become their own fence and some interior shoot darts upward and bears its fruit! What a lesson to man! So are human beings, referred to the highest standard, the celestial fruit which they suggest and aspire to bear, browsed on by fate, and only the most persistent and strongest genius prevails, defends itself, sends a tender scion upward at last, and drops its perfect fruit on the ungrateful earth; and that fruit, though somewhat smaller, perchance, is

[1] [*Excursions*, pp. 299–301, 307; Riv. 368, 369, 376, 377.]

essentially the same in flavor and quality as if it had grown in a garden. That fruit seems all the sweeter and more palatable even for the very difficulties it has contended with.

Here, on this rugged and woody hillside, has grown an apple tree, not planted by man, no relic of a former orchard, but a natural growth like the pines and oaks. Most fruits we prize and use depend entirely on our care. Corn and grain, potatoes, peaches (*here*), and melons, etc., depend altogether on our planting, but the apple emulates man's independence and enterprise. Like him to some extent, it has migrated to this new world and is ever here and there making its way amid the aboriginal trees. It accompanies man like the ox and dog and horse, which also sometimes run wild and maintain themselves.

Spite of wandering kine and other adverse circumstance, that scorned shrub, valued only by small birds as a covert, a shelter from hawks, has its blossom week, and in course its harvest, sincere, though small.[1]

'T was thirty years ago,
In a rocky pasture field
Sprang an infant apple grove
Unplanted and concealed.
I sing the wild apple, theme enough for me.
I love the racy fruit and I reverence the tree.

In that small family there was one that loved the sun, which sent its root down deep and took fast hold on life, while the others went to sleep.

[1] [*Excursions*, pp. 300, 305–307; Riv. 369, 374–377.]

In two years' time 't had thus
Reached the level of the rocks,
Admired the stretching world,
Nor feared the wandering flocks.
But at this tender age
Its sufferings began:
There came a browsing ox
And cut it down a span.
Its heart did bleed all day,
And when the birds were hushed, —

Oct. 29. P. M. — Down river in boat.

Though it did not rain yesterday, as I remember, it was overcast all day, — did n't clear up, — and this forenoon it has rained again. The sun only comes out once or twice for a moment this afternoon.[1] Accordingly, this being the seventh day of cloud and the fourth of rain (skipping yesterday), the river is very high for the season and all over the meadow in front of the house, and still rising. Many are out (as yesterday) shooting musquash.

I see evidently what Storer calls the little brown snake (*Coluber ordinatus*), driven out of the grass of the meadow by the flood. Its head is raised to the surface for air, and it appears sluggish and enfeebled by the water. Putting out my paddle, it immediately coils about it and is raised into the boat. It has a distinct pale-pink abdomen, slightly bluish forward. Above it is pale-brown, with a still lighter brown stripe running down the middle of the back, on each side of

[1] This is the fall storm.

which is a line of dark-brown spots about an eighth of an inch apart, as the two lines are also an eighth of an inch apart. This snake is about one foot long. I hold it in my hand, and it is quite inoffensive.

The sun comes out once or twice, the water is smooth, and the cocks crow as in spring. As I am picking cranberries below Flint's Bridge, they being drifted against the shore together with much loose meadow wreck, I notice many crickets wrecked with them and half drowned, as well as snails' shells. Spiders, however, are in their element.

A flock of about eighty crows flies ramblingly over toward the sowing, cawing and loitering and making a great ado, apparently about nothing. I meet Goodwin and afterward Melvin. They are musquash-shooting. The latter has killed nineteen to-day downstream, thirty-one yesterday up the Assabet. He has also a coot, which he calls a little black dipper! It has some clear white under its tail. Is this, then, the name of that dipper? and are the young dippers of Moosehead different?[1] The latter were in flocks and had some white in front, I have said. Melvin asked if I had seen "Pink-eye," meaning Goodwin.

There is a large square-sided black rock, say five or six feet high, eight long, and five wide, on Mrs. Ripley's shore, wedged close between two small elms, and your first thought on seeing it is that it has according to some law occupied that space between the trees, not reflecting that it is more ancient than the trees by a geological period, and that the latter have but re-

[1] *Vide* Nov. 27, 1857.

cently sprung up under its protection. I thought the rock had been accurately fitted into that space.

There are some things of which I cannot at once tell whether I have dreamed them or they are real; as if they were just, perchance, establishing, or else losing, a real basis in my world. This is especially the case in the early morning hours, when there is a gradual transition from dreams to waking thoughts, from illusions to actualities, as from darkness, or perchance moon and star light, to sunlight. Dreams are real, as is the light of the stars and moon, and theirs is said to be a *dreamy* light. Such early morning thoughts as I speak of occupy a debatable ground between dreams and waking thoughts. They are a sort of permanent dream in my mind. At least, until we have for some time changed our position from prostrate to erect, and commenced or faced some of the duties of the day, we cannot tell what we have dreamed from what we have actually experienced.

This morning, for instance, for the twentieth time at least, I thought of that mountain in the easterly part of our town (where no high hill actually is) which once or twice I had ascended, and often allowed my thoughts alone to climb. I now contemplate it in my mind as a familiar thought which I have surely had for many years from time to time, but whether anything could have reminded me of it in the middle of yesterday, whether I ever before remembered it in broad daylight, I doubt. I can now eke out the vision I had of it this morning with my old and yesterday forgotten dreams.

My way up used to lie through a dark and unfrequented wood at its base, — I cannot now tell exactly, it was so long ago, under what circumstances I first ascended, only that I shuddered as I went along (I have an indistinct remembrance of having been out overnight alone), — and then I steadily ascended along a rocky ridge half clad with stinted trees, where wild beasts haunted, till I lost myself quite in the upper air and clouds, seeming to pass an imaginary line which separates a hill, mere earth heaped up, from a mountain, into a superterranean grandeur and sublimity. What distinguishes that summit above the earthy line, is that it is unhandselled, awful, grand. It can never become familiar; you are lost the moment you set foot there. You know no path, but wander, thrilled, over the bare and pathless rock, as if it were solidified air and cloud. That rocky, misty summit, secreted in the clouds, was far more thrillingly awful and sublime than the crater of a volcano spouting fire.

This is a business we can partly understand. The perfect mountain height is already thoroughly purified. It is as if you trod with awe the face of a god turned up, unwittingly but helplessly, yielding to the laws of gravity. And are there not such mountains, east or west, from which you may look down on Concord in your thought, and on all the world? In dreams I am shown this height from time to time, and I seem to have asked my fellow once to climb there with me, and yet I am constrained to believe that I never actually ascended it. It chances, now I think of it,[1] that

[1] Now *first think of it*, at this stage of my description, which makes

it rises in my mind where lies the Burying-Hill. You might go through its gate to enter that dark wood,[1] but that hill and its graves are so concealed and obliterated by the awful mountain that I never thought of them as underlying it. Might not the graveyards of the just always be hills, ways by which we ascend and overlook the plain?

But my old way down was different, and, indeed, this was another way up, though I never so ascended. I came out, as I descended, breathing the thicker air. I came out the belt of wood into a familiar pasture, and along down by a wall. Often, as I go along the low side of this pasture, I let my thoughts ascend toward the mount, gradually entering the stinted wood (Nature subdued) and the thinner air, and drape themselves with mists. There are ever two ways up: one is through the dark wood, the other through the sunny pasture. That is, I reach and discover the mountain only through the dark wood, but I see to my surprise, when I look off between the mists from its summit, how it is ever adjacent to my native fields, nay, imminent over them, and accessible through a sunny pasture. Why is it that in the lives of men we hear more of the dark wood than of the sunny pasture?

A hard-featured god reposing, whose breath hangs about his forehead.

it the more singularly symbolical. The interlineations on the last page were made before this. [The interlineations referred to comprise the words "only that I shuddered . . . overnight alone" in the last paragraph.]

[1] Perchance that was the grave.

Though the pleasure of ascending the mountain is largely mixed with awe, my thoughts are purified and sublimed by it, as if I had been translated.

I see that men may be well-mannered or conventionally polite toward men, but skeptical toward God.

Forever in my dream and in my morning thought,
Eastward a mount ascends;
But when in the sunbeam its hard outline is sought,
It all dissolves and ends.
The woods that way are gates; the pastures too slope up
To an unearthly ground;
But when I ask my mates to take the staff and cup,
It can no more be found.
Perhaps I have no shoes fit for the lofty soil
Where my thoughts graze,
No properly spun clues, nor well-strained mid-day oil,
Or must I mend my ways?
It is a promised land which I have not yet earned.
I have not made beginning
With consecrated hand, nor have I ever learned
To lay the underpinning.
The mountain sinks by day, as do my lofty thoughts,
Because I'm not high-minded.
If I could think alway above these hills and warts,
I should see it, though blinded.
It is a spiral path within the pilgrim's soul
Leads to this mountain's brow;
Commencing at his hearth he climbs up to this goal
He knows not when nor how.

We see mankind generally either (from ignorance or avarice) toiling too hard and becoming mere machines in order to acquire wealth, or perhaps inheriting it or getting it by other accident, having recourse, for relaxation after excessive toil or as a mere relief to their idle ennui, to artificial amusements, rarely elevating and often debasing. I think that men generally are mistaken with regard to amusements. Every one who deserves to be regarded as higher than the brute may be supposed to have an earnest purpose, to accomplish which is the object of his existence, and this is at once his work and his supremest pleasure; and for diversion and relaxation, for suggestion and education and strength, there is offered the never-failing amusement of getting a living, — never-failing, I mean, when temperately indulged in. I know of no such amusement, — so wholesome and in every sense profitable, — for instance, as to spend an hour or two in a day picking some berries or other fruits which will be food for the winter, or collecting driftwood from the river for fuel, or cultivating the few beans or potatoes which I want. Theatres and operas, which intoxicate for a season, are as nothing compared to these pursuits. And so it is with all the true arts of life. Farming and building and manufacturing and sailing are the greatest and wholesomest amusements that were ever invented (for God invented them), and I suppose that the farmers and mechanics know it, only I think they indulge to excess generally, and so what was meant for a joy becomes the sweat of the brow. Gambling, horse-racing, loafing, and rowdyism generally, after all tempt but

few. The mass are tempted by those other amusements, of farming, etc. It is a great amusement, and more profitable than I could have invented, to go and spend an afternoon hour picking cranberries. By these various pursuits your experience becomes singularly complete and rounded. The novelty and significance of such pursuits are remarkable. Such is the path by which we climb to the heights of our being; and compare the poetry which such simple pursuits have inspired with the unreadable volumes which have been written about art.

Who is the most profitable companion? He who has been picking cranberries and chopping wood, or he who has been attending the opera all his days? I find when I have been building a fence or surveying a farm, or even collecting simples, that these were the true paths to perception and enjoyment. My being seems to have put forth new roots and to be more strongly planted. This is the true way to crack the nut of happiness. If, as a poet or naturalist, you wish to explore a given neighborhood, go and live in it, *i. e.* get your living in it. Fish in its streams, hunt in its forests, gather fuel from its water, its woods, cultivate the ground, and pluck the wild fruits, etc., etc. This will be the surest and speediest way to those perceptions you covet. No amusement has worn better than farming. It tempts men just as strongly to-day as in the day of Cincinnatus. Healthily and properly pursued, it is not a whit more grave than huckleberrying, and if it takes any airs on itself as superior there's something wrong about it.

I have aspired to practice in succession all the honest arts of life, that I may gather all their fruits. But then, if you are intemperate, if you toil to raise an unnecessary amount of corn, even the large crop of wheat becomes as a small crop of chaff.

If our living were once honestly got, then it would be time to invent other amusements.

After reading Ruskin on the love of Nature, I think, "Drink deep, or taste not the Pierian spring." He there, to my surprise, expresses the common infidelity of his age and race. He has not implicitly surrendered himself to her. And what does he substitute for that Nature? I do not know, unless it be the Church of England. Questioning whether that relation to Nature was of so much value, after all! It is sour grapes! He does not speak to the condition of foxes that have more spring in their legs. The love of Nature and fullest perception of the revelation which she is to man is not compatible with the belief in the peculiar revelation of the Bible which Ruskin entertains.

Oct. 30. Another, the eighth, day of cloudy weather, though no rain to-day.

P. M. — Near the island, in my boat, I scare up a bittern (*Ardea minor*), and afterward half a dozen ducks, probably summer ducks. Saw a large flock of blackbirds yesterday.

There's a very large and complete circle round the moon this evening, which part way round is a faint rainbow. It is a clear circular space, sharply and mathematically cut out of a thin mackerel sky. You

see no mist within it, large as it is, nor even a star.

I find thousands of ants now apparently gone into winter quarters in my stumps, large black ones, red in the middle, partly dormant even this warm weather, yet with white grubs or young. Some are winged. . . .

The clintonia was perfectly at home there.[1] Its leaves were just as handsomely formed and green and disposed commonly in triangles about its stem, and its berries were just as blue and glossy as if they grew by some botanist's favorite walk in Concord. . . .

Oct. 31. Cloudy still and, in the afternoon, rain, the ninth day. The sugar maple and elm leaves are fallen, but I still see many large oaks, especially scarlet ones, which have lost very few leaves. Some scarlet oaks are pretty bright yet. The white birches, too, still retain many yellow leaves at their very tops, having a lively flame-like look when seen against the woods. River probably at its height, higher than before since spring.

I see some of those great chocolate-colored fungi already emptied. They burst open and expand into a saucer, and the dust blows out, leaving a distinct spongy bottom or base, often more than an inch thick. Like sponge to the eye, but how unlike it in its repugnance to water! Many small grubs, covered and disguised with the dust, are feeding on these fungi. What primitive and simple bread or manna these are!

Out of a natural curiosity, the growth of the woods,

[1] [In the Maine woods.]

we walked into the dark and musty log house there,[1] trampling down the rank herd's-grass three feet high which grew close up to the door, and the hunter followed us as if to see us put the house on as he had done. He behaved as if he were the latest comer, and was so absorbed in us that he did not appear to own the newly baked loaf of bread in a blackened Yankee baker on the counter by his side, and I thought at first it had lain over from another season.

In the Lee farm swamp, by the old Sam Barrett mill site, I see two kinds of ferns still green and much in fruit, apparently the *Aspidium spinulosum* (?) and *cristatum* (?).[2] They are also common in other swamps now. They are quite fresh in those cold and wet places and almost flattened down now. The atmosphere of the house is less congenial to them. In the summer you might not have noticed them. Now they are conspicuous amid the withered leaves. You are inclined to approach and raise each frond in succession, moist, trembling, fragile greenness. They linger thus in all moist clammy swamps under the bare maples and grape-vines and witch-hazels, and about each trickling spring which is half choked with fallen leaves. What means this persistent vitality, invulnerable to frost and wet? Why were these spared when the brakes and osmundas were stricken down? They stay as if to keep up the spirits of the cold-blooded frogs which have not yet gone into the mud; that the summer may die with decent and graceful moderation,

[1] [At Telos Lake. See *Maine Woods*, pp. 268, 269; Riv. 333, 334.]

[2] *Vide* page [117].

gradually. Is not the water of the spring improved by their presence? They fall back and droop here and there, like the plumes of departing summer, — of the departing year. Even in them I feel an argument for immortality. Death is so far from being universal. The same destroyer does not destroy all. How valuable they are (with the lycopodiums) for cheerfulness. Greenness at the end of the year, after the fall of the leaf, as in a hale old age. To my eyes they are tall and noble as palm groves, and always some forest nobleness seems to have its haunt under their umbrage. Each such green tuft of ferns is a grove where some nobility dwells and walks. All that was immortal in the swamp's herbage seems here crowded into smaller compass, — the concentrated greenness of the swamp. How dear they must be to the chickadee and the rabbit! The cool, slowly retreating rear-guard of the swamp army. What virtue is theirs that enables them to resist the frost?

If you are afflicted with melancholy at this season, go to the swamp and see the brave spears of skunk-cabbage buds already advanced toward a new year. Their gravestones are not bespoken yet. Who shall be sexton to them? Is it the winter of their discontent? Do they seem to have lain down to die, despairing of skunk-cabbagedom? "Up and at 'em," "Give it to 'em," "Excelsior," "Put it through," — these are their mottoes. Mortal human creatures must take a little respite in this fall of the year; their spirits do flag a little. There is a little questioning of destiny, and thinking to go like cowards to where the "weary shall

be at rest." But not so with the skunk-cabbage. Its withered leaves fall and are transfixed by a rising bud. Winter and death are ignored; the circle of life is complete. Are these false prophets? Is it a lie or a vain boast underneath the skunk-cabbage bud, pushing it upward and lifting the dead leaves with it? They rest with spears advanced; they rest to shoot!

I say it is good for me to be here, slumping in the mud, a trap covered with withered leaves. See those green cabbage buds lifting the dry leaves in that watery and muddy place. There is no can't nor cant to them. They see over the brow of winter's hill. They see another summer ahead.

IV

NOVEMBER, 1857

(ÆT. 40)

Nov. 1. P. M. — To Fair Haven Pond over Cliffs. Another cloudy afternoon after a clear morning.

When I enter the woods I notice the drier crispier rustle of withered leaves on the oak trees, — a sharper susurrus.

Going over the high field west of the cut, my foot strikes a rattle-pod in the stubble, and it is betrayed. From that faint sound I knew it must be there, and went back and found it. I could have told it as well in the dark. How often I have found pennyroyal by the fragrance it emitted when bruised by my feet!

The lowest and most succulent oak sprouts *in exposed places* are red or green longest. Large trees quite protected from sun and wind will be greener still. The larches are at the height of their change.

I see much witch-hazel in the swamp by the south end of the Abiel Wheeler grape meadow. Some of it is quite fresh and bright. Its bark is alternate white and smooth reddish-brown, the small twigs looking as if gossamer had lodged on and draped them. What a lively spray it has, both in form and color! Truly it looks as if it would make divining-rods, — as if its twigs knew where the true gold was and could point to it. The gold is in their late blossoms. Let them

alone and they never point down to earth. They impart to the whole hillside a speckled, parti-colored look.

I see the common prinos berries partly eaten about the hole of a mouse under a stump.

As I return by the Well Meadow Field and then Wheeler's large wood, the sun shines from over Fair Haven Hill into the wood, and I see that the sun, when low, will shine into a thick wood, which you had supposed always dark, as much as twenty rods, lighting it all up, making the gray, lichen-clad stems of the trees all warm and bright with light, and a distinct black shadow behind each. As if every grove, however dense, had its turn.

A higher truth, though only dimly hinted at, thrills us more than a lower expressed.

Jersey tea has perhaps the most green leaves of any shrub at present.

Nov. 2. P. M. — To Bateman's Pond.

Row up Assabet as far as the Pokelogan, thence on foot. It is very pleasant and cheerful nowadays, when the brown and withered leaves strew the ground and almost every plant is fallen or withered, to come upon a patch of polypody on some rocky hillside in the woods, — as in abundance on hillside between Calla Swamp and Bateman's Pond, and still more same hillside east of the callas, — where, in the midst of the dry and rustling leaves, defying frost, it stands so freshly green and full of life. The mere greenness, which was not remarkable in the summer, is positively interesting now. My thoughts are with the polypody a long

time after my body has passed. The brakes, the sarsaparilla, the osmundas, the Solomon's-seals, the lady's-slippers have long since withered and fallen. The huckleberries and blueberries, too, have lost their leaves. The forest floor is covered with a thick coat of moist brown leaves. But what is that perennial and spring-like verdure that clothes the rocks, of small green plumes pointing various ways? It is the cheerful community of the polypody. It survives at least as the type of vegetation, to remind us of the spring which shall not fail. These are the green pastures where I browse now. Why is not this form copied by our sculptors instead of the foreign acanthus leaves and bays? The sight of this unwithering green leaf excites me like red at some seasons. Are not the wood frogs the philosophers who walk (?) in these groves?[1] Methinks I imbibe a cool, composed, frog-like philosophy when I behold them. I don't care for acanthus leaves; they are far-fetched. I do love this form, however, and would like to see it painted or sculptured, whether on your marble or my butter. How fit for a tuft about the base of a column!

I come to a black snake in the wood-path, with its crushed head resting on a stone and its uninjured body trailing thence. How often I see where thus some heel has bruised the serpent's head! I think it an unnatural antipathy.

Crossed over that high, flat-backed rocky hill, where the rocks, as usual thereabouts, stand on their edges, and the grain, though usually running northeasterly

[1] [Channing, p. 103.]

Curly-pate Hill, above Bateman's Pond

and southwesterly, — by compass east-northeast, west-southwest, — is frequently kinked up in a curious manner, reminding me of a curly head. Call the hill Curly-pate.

Bateman's Pond is agitated by the strong wind, — a slate-colored surface under the cloudy sky. I find some good blue pearmains under their tree in a swamp, amid the huckleberry bushes, etc., all fallen. They lie with a rich bloom on them still, though half of them are gnawed by squirrels or rabbits; low in the sedge, with decayed leaves adhering to them.

How contagious are boys' games! A short time ago they were spinning tops, as I saw and heard, all the country over. Now every boy has a stick curved at the end, a *hawkie* (?), in his hand, whether in yards or in distant lanes I meet them.

The evergreen ferns and lycopodiums now have their day; now is the *flower* of their age, and their greenness is appreciated. They are much the clearest and most liquid green in the woods, more yellow and brown specked in the open places.

The form of the polypody is *strangely* interesting; it is even outlandish. Some forms, though common in our midst, are thus perennially foreign as the growths of other latitudes; there being a greater interval between us and their kind than usual. We all feel the ferns to be further from us, essentially and sympathetically, than the phænogamous plants, the roses and weeds, for instance. It needs no geology nor botany to assure us of that. We feel it, and told *them* of it first. The bare outline of the polypody thrills me strangely. It

is a strange type which I cannot read. It only piques me. Simple as it is, it is as strange as an Oriental character. It is quite independent of my race, and of the Indian, and all mankind. It is a fabulous, mythological form, such as prevailed when the earth and air and water were inhabited by those extinct fossil creatures that we find. It is contemporary with them, and affects as the sight of them.

As I stood on Curly-pate, the air had become gradually thick with mist in the southwest. The sky was overcast, and a cool, strong wind blew from the same quarter, and in the mist I perceived the strong scent of smoke from some burning. Standing on one of those curly-headed rocks, whose strata are vertical, gives me a sense of elevation like a mountain-top. In fact, they are on the axis of elevation.

There are no fresh — or blue — fringed gentians by the swamp-side by Bateman's now.

Wild apples have lost some of their brilliancy now and are chiefly fallen.

Returning, I see the red oak on R. W. E.'s shore reflected in the bright sky water. In the reflection the tree is black against the clear whitish sky, though as I see it against the opposite woods it is a warm greenish yellow. But the river sees it against the bright sky, and hence the reflection is like ink. The water tells me how it looks to it seen from below. I think that most men, as farmers, hunters, fishers, etc., walk along a river's bank, or paddle along its stream, without seeing the reflections. Their minds are not abstracted from the surface, from surfaces generally. It is only

a reflecting mind that sees reflections. I am aware often that I have been occupied with shallow and commonplace thoughts, looking for something superficial, when I did not see the most glorious reflections, though exactly in the line of my vision. If the fisherman was looking at the reflection, he would not know when he had a nibble! I know from my own experience that he may cast his line right over the most elysian landscape and sky, and not *catch* the slightest notion of them. You must be in an abstract mood to see reflections however distinct. I was even startled by the sight of that reflected red oak as if it were a black water-spirit. When we are enough abstracted, the opaque earth itself reflects images to us; *i. e.*, we are imaginative, see visions, etc. Such a reflection, this inky, leafy tree, against the white sky, can only be seen at this season.

The water is falling fast, and I push *direct* over the meadow this evening, probably for the last time this fall, scraping the cranberry vines and hummocks from time to time with my flat-bottomed boat.

Nov. 3. P. M. — To the Easterbrooks moraine *via* Ponkawtasset-top.

Islands, pale-brown grassy isles, are appearing again in the meadow as the water goes down. From this hilltop, looking down-stream over the Great Meadows away from the sun, the water is rather dark, it being windy, but about the shores of the grassy isles is a lighter-colored smooth space.

Pitch pine needles are almost all fallen.

There is a wild pear tree on the east side of Ponkawtasset, which I find to be four and a half feet in circumference at four feet from the ground.

Looking westward now, at 4 P. M., I see against the sunlight, where the twigs of a maple and black birch intermingle, a little gossamer or fine cobwebs, but much more the twigs, especially of the birch, waving slightly, reflect the light like cobwebs. It is a phenomenon peculiar to this season, when the twigs are bare and the air is clear. I cannot easily tell what is cobweb and what twig, but the latter often curve upward more than the other.

I see on many rocks, etc., the seeds of the barberry, which have been voided by birds, — robins, no doubt, chiefly. How many they must thus scatter over the fields, spreading the barberry far and wide! That has been their business for a month.

Follow up the Boulder Field northward, and it terminates in that moraine. As I return down the Boulder Field, I see the now winter-colored — *i. e.* reddish (of oak leaves) — horizon of hills, with its few white houses, four or five miles distant southward, between two of the boulders, which are a dozen rods from me, a dozen feet high, and nearly as much apart, — as a landscape between the frame of a picture. But what a picture-frame! These two great slumbering masses of rock, reposing like a pair of mastodons on the surface of the pasture, completely shutting out a mile of the horizon on each side, while between their adjacent sides, which are nearly perpendicular, I see to the now purified, dry, reddish, leafy horizon, with a faint tinge of

blue from the distance. To see a remote landscape between two near rocks! I want no other gilding to my picture-frame. There they lie, as perchance they tumbled and split from off an iceberg. What better frame could you have? The globe itself, here named pasture, for ground and foreground, two great boulders for the sides of the frame, and the sky itself for the top! And for artists and subject, God and Nature! Such pictures cost nothing but eyes, and it will not bankrupt one to own them. They were not stolen by any conqueror as spoils of war, and none can doubt but they are really the works of an old master. What more, pray, will you see between any two slips of gilded wood in that pasture you call Europe and browse in sometimes? It is singular that several of those rocks should be thus split into twins. Even very low ones, just appearing above the surface, are divided and parallel, having a path between them.

It would be something to own that pasture with the great rocks in it! And yet I suppose they are considered an incumbrance only by the owner.

I came along the path that comes out just this side the lime-kiln.

Coming by Ebby Hubbard's thick maple and pine wood, I see the rays of the sun, now not much above the horizon, penetrating quite through it to my side in very narrow and slender glades of light, peculiarly bright. It seems, then, that no wood is so dense but that the rays of the setting sun may penetrate twenty rods into it. The other day (November 1st), I stood on the sunny side of such a wood at the same season,

or a little earlier. Then I saw the lit sides of the tree stems all aglow with their lichens, and observed their black shadows behind. Now I see chiefly the dark stems massed together, and it is the warm sunlight that is reduced to a pencil of light; *i. e.*, then light was the rule and shadow the exception, now shadow the rule and light the exception.

I notice some old cow-droppings in a pasture, which are decidedly pink. Even these trivial objects awaken agreeable associations in my mind, connected not only with my own actual rambles but with what I have read of the prairies and pampas and Eastern land of grass, the great pastures of the world.

Nov. 4. P. M. — To Pine Hill *via* Spanish Brook.

I leave the railroad at Walden Crossing and follow the path to Spanish Brook. How swift Nature is to repair the damage that man does! When he has cut down a tree and left only a white-topped and bleeding stump, she comes at once to the rescue with her chemistry, and covers it decently with a fresh coat of gray, and in course of time she adds a thick coat of green cup and bright cockscomb lichens, and it becomes an object of new interest to the lover of nature! Suppose it were always to remain a raw stump instead! It becomes a shell on which this humble vegetation spreads and displays itself, and we forget the death of the larger in the life of the less.

I see in the path some rank thimble-berry shoots covered with that peculiar hoary bloom very thickly. It is only rubbed off in a few places down to the purple

skin, by some passing hunter perchance. It is a very singular and delicate outer coat, surely, for a plant to wear. I find that I can write my name in it with a pointed stick very distinctly, each stroke, however fine, going down to the purple. It is a new kind of enamelled card. What is this bloom, and what purpose does it serve? Is there anything analogous in animated nature? It is the *coup de grace*, the last touch and perfection of any work, a thin elysian veil cast over it, through which it may be viewed. It is breathed on by the artist, and thereafter his work is not to be touched without injury. It is the evidence of a ripe and completed work, on which the unexhausted artist has breathed out of his superfluous genius, and his work looks through it as a veil. If it is a poem, it must be invested with a similar bloom by the imagination of the reader. It is the subsidence of superfluous ripeness. Like a fruit preserved in its own sugar. It is the handle by which the imagination grasps it.

I frequently see a spreading pitch pine on whose lower and horizontal limbs the falling needles have lodged, forming thick and unsightly masses, where anon the snow will collect and make a close canopy. The evergreens, with their leaves, are, of course, more likely to catch this litter than the deciduous trees, and the pines especially, because their lower branches are oftener horizontal and flat, beside being unyielding to the wind. Robins build there.

I notice the new and as yet unswollen scales of willow catkins or buds (the first [?] by the pond) quite yellow in the sun, but nearer I find that half are turned black.

The evergreen ferns and lycopodiums, etc., on the forest floor, though partly fallen, represent the evergreen trees among humbler plants.

I climb Pine Hill just as the sun is setting, this cool evening. Sitting with my back to a thick oak sprout whose leaves still glow with life, Walden lies an oblong square endwise to, beneath me. Its surface is slightly rippled, and dusky prolonged reflections of trees extend wholly across its length, or half a mile, — I sit high. The sun is once or twice its diameter above the horizon, and the mountains north of it stand out grand and distinct, a decided purple. But when I look critically, I distinguish a whitish mist — such is the color of the denser air — about their lower parts, while their tops are dark-blue. (So the mountains too have a bloom on them; and is not the bloom on fruits equivalent to that blue veil of air which distance gives to many objects?) I see one glistening reflection on the dusky and leafy northwestern earth, seven or eight miles off, betraying a window there, though no house can be seen. It twinkles incessantly, as from a waving surface. This, probably, is the undulation of the air. Now that the sun is actually setting, the mountains are dark-blue from top to bottom. As usual, a small cloud attends the sun to the portals of the day and reflects this brightness to us, now that he is gone. But those grand and glorious mountains, how impossible to remember daily that they are there, and to live accordingly! They are meant to be a perpetual reminder to us, pointing out the way.

Nov. 5. P. M. — To the Dam Meadows.

But little corn is left in the field now, and that looks rather black. There is an abundance of cat-tail in the Dam Meadows.

Returning, talked with Minott. He told me how he and Harry Hooper used to go to Howard's meadow (Heywood's, by the railroad) when it was flowed and kill fishes through the ice. They would cut a long stick and go carefully over the ice when it was only a couple of inches thick, and when they saw a fish, strike the ice smartly, cracking it in all directions, right over him, and when he turned his belly, being stunned, would cut him out quickly before he came to. These were little fishes which he called "prods." He did n't know much more about them. They were somewhat like a small pout, but had different heads. They got so many once that he told Harry to cut a stick and string them and they'd give them to Zilpha as they went by. He has caught pickerel in the brook there which weighed two or three pounds.

He went to Bateman's Pond once in the winter to catch minnows with a net through the ice, but did n't get any. He went — rode — with Oliver Williams first into Acton and then round to this pond on this errand.

Minott was rather timid. One day early in the winter he had been over to Fair Haven Hill after a fox with John Wyman, but they did n't get him. The pond was frozen about two inches thick, but you could easily see the water through the ice, and when they came back, Wyman said he was going straight across because it was nearer, but Minott objected. But Wyman told

him to follow; it was safe enough. Minott followed half a dozen rods and then decided that he would n't risk it and went back; he 'd go ten miles round sooner than cross. "But," said Minott, "the fellow kept on and I 'll be hanged if he did n't get safe across."

The pitch pines generally have lost their leaves now, and the larches are fast falling. The elms have been bare some time.

Sometimes I would rather get a transient glimpse or side view of a thing than stand fronting to it, — as those polypodies. The object I caught a glimpse of as I went by haunts my thoughts a long time, is infinitely suggestive, and I do not care to front it and scrutinize it, for I know that the thing that really concerns me is not there, but in my relation to that. That is a mere reflecting surface. It is not the polypody in my pitcher or herbarium, or which I may possibly persuade to grow on a bank in my yard, or which is described in botanies, that interests me, but the one that I pass by in my walks a little distance off, when in the right mood. Its influence is sporadic, wafted through the air to me. Do you imagine its fruit to stick to the back of the leaf all winter? At this season polypody is in the air.[1] It is worth the while to walk in swamps now, to bathe your eyes with greenness. The terminal shield fern is the handsomest and glossiest green.

Start up a snipe feeding in a wet part of the Dam Meadows.

I think that the man of science makes this mistake, and the mass of mankind along with him: that you

[1] [Channing, p. 103.]

should coolly give your chief attention to the phenomenon which excites you as something independent on you, and not as it is related to you. The important fact is its effect on me. He thinks that I have no business to see anything else but just what he defines the rainbow to be, but I care not whether my vision of truth is a waking thought or dream remembered, whether it is seen in the light or in the dark. It is the subject of the vision, the truth alone, that concerns me. The philosopher for whom rainbows, etc., can be explained away never saw them. With regard to such objects, I find that it is not they themselves (with which the men of science deal) that concern me; the point of interest is somewhere *between* me and them (*i. e.* the objects). . . .

And where does your Eastern stuff go to?[1] Whose houses does it build? It has built Bangor, and what is the precise value of Bangor, omitting the lumber on its wharves? Western stuff is good enough for me. I think that this craving a better material than we deserve, and wasting what we get, is the secret of bankruptcy. And what is it, after all, but lumber? I do not wish to see any more poor men in rich houses. I would rather see one rich man in a poor house. No more cripples on stilts. . . .

For a man to pride himself on this kind of wealth, as if it enriched him, is as ridiculous as if one struggling in the ocean with a bag of gold on his back should gasp out, "I am worth a hundred thousand dollars!"

[1] [Refers, of course, to the lumbering operations of the Maine woods.]

I see his ineffectual struggles just as plainly, and what it is that sinks him.

Nov. 6. Very warm but rather cloudy weather, after rain in the night. Wind southwest. Thermometer on north of the house 70° at 12 M. Indian summer. The cocks crow in the soft air. They are very sensitive to atmospheric changes.

P. M. — To Curly-pate *via* old Carlisle road.

Stedman Buttrick tells me that Dr. Ripley used to have his pork packed with the best pieces at the top of the barrel, and when some parishioner wondered at it, that he should thus eat these first, he answered that when packed thus the topmost were the best all the way through.

He said that his grandfather lived in the Jarvis house, and that the other old house whose upper story projected over the lower like the Hunt house, and which I saw in the picture of Concord Fight, stood close to his own house, and he pulled it down when he was sixteen.

I passed through that chestnut wood in the hollow southeast of Curly-pate. Turning over the wet chestnut leaves in the hollows, looking for nuts, I found a red-backed salamander, between three and four inches long, bluish-gray beneath (*Salamandra erythronota*). It jerked itself about in a lively manner, trying to hide itself under the leaves, and would quickly slip out of my fingers. Its motions appeared to partake of those of a snake and a frog, — between a squirm and a hop. It was not particularly swift, yet, from the character

of the motion and its glossiness, it was *glancing*. A dozen rods further I turned [up] another, very similar but without a red back, but rather slightly clay-colored. I did not observe any transverse bands; else it might be the *S. fasciata*.

When I came out on to the old Carlisle road in the dusk on my return, I saw Brooks Clark coming homeward, with his axe in his hand and both hands behind his back, being bent almost double. He said he was over eighty. Some years ago he bought some land up that way, and, the birches having sprung up there, he called it his birch pasture. There was enough birch wood there to carry him through the winter, and he was now cutting it. He remembered when they began to burn lime there, and bought the right to get out stone of Easterbrooks more than sixty years ago. It was Peter Barrett that began it. The lime sold for $5.00 a cask (larger casks than now). But the stone was difficult to get out. He remembers seeing the mowers at work in the meadow where Stedman Buttrick's handsome pine and maple wood is, seventy years ago, and where there was a large old chestnut by the roadside there, which being cut, two sprouts came up which have become the largest chestnut trees by the wall now. As for the yellow birch cellar-hole, Ephraim Brown told him that old Henry Flint (an ancestor of Clark's wife) dug it, and erected the frame of a house there, but never finished it, selling out, going to live by the river. It was never finished. Clark's father told him that he remembered when there were no fences between his house and Lawrence's; it was

all open. This road was the new one; the bridle-road the old one.

Minott is a very pleasing figure in nature. He improves every scenery, — he and his comrades, Harry Hooper, John Wyman, Oliver Williams, etc. If he gets into a pond-hole he disturbs it no more than a water-spirit for me.

Nov. 7. You will sometimes see a sudden wave flow along a puny ditch of a brook, inundating all its shores, when a musquash is making his escape beneath. He soon plunges into some hole in the bank under water, and all is still again.

P. M. — To Bateman's Pond with R. W. E.

Stedman Buttrick, speaking of R. W. E.'s cow that was killed by lightning and not found for some days, said that they heard a "bellering" of the cows some days before they found her, and they found the ground much trampled about the dead cow; that that was the way with cows in such cases; if such an accident happened to one of their number, they would have spells of gathering around her and "bellering."

Minott adorns whatever part of nature he touches; whichever way he walks he transfigures the earth for me. If a common man speaks of Walden Pond to me, I see only a shallow, dull-colored body of water without reflections or peculiar color, but if Minott speaks of it, I see the green water and reflected hills at once, for he *has been* there. I hear the rustle of the leaves from woods which he goes through.

This has been another Indian-summer day. Thermometer 58° at noon.

Nov. 8. A warm, cloudy, rain-threatening morning.

About 10 A. M. a long flock of geese are going over from northeast to southwest, or parallel with the general direction of the coast and great mountain-ranges. The sonorous, quavering sounds of the geese are the voice of this cloudy air, — a sound that comes from directly between us and the sky, an aerial sound, and yet so distinct, heavy, and sonorous, a clanking chain drawn through the heavy air. I saw through my window some children looking up and pointing their tiny bows into the heavens, and I knew at once that the geese were in the air. It is always an exciting event. The children, instinctively aware of its importance, rushed into the house to tell their parents. These travellers are revealed to you by the upward-turned gaze of men. And though these undulating lines are melting into the southwestern sky, the sound comes clear and distinct to you as the clank of a chain in a neighboring stithy. So they migrate, not flitting from hedge to hedge, but from latitude to latitude, from State to State, steering boldly out into the ocean of the air. It is remarkable how these large objects, so plain when your vision is rightly directed, may be lost in the sky if you look away for a moment, — as hard to hit as a star with a telescope.

It is a sort of encouraging or soothing sound to assuage their painful fears when they go over a town, as a man moans to deaden a physical pain. The direction of their flight each spring and autumn reminds us inlanders how the coast trends. In the afternoon I met Flood, who had just endeavored to draw my attention to a flock of geese in the mizzling air, but encounter-

ing me he lost sight of them, while I, at length, looking that way, discerned them, though he could not. This was the third flock to-day. Now if ever, then, we may expect a change in the weather.

P. M. — To the swamp in front of the C. Miles house.

The great white pines on the hill south of it were cut, apparently last winter. I count on two stumps about one hundred and twenty-five rings, and the sap averages in each case about three inches thick.

In a thick white pine wood, as in that swamp at the east end, where the ground is level, the ground now (and for some time) is completely covered with a carpet of pale-brown leaves, completely concealing the green mosses and even some lycopodiums. The effect is exactly as [if] a uniform pale-brown matting had been spread over the green and russet floor. It is even soothing to walk over this soft and springy bed. How silently and unobserved by most do these changes take place! This additional warm matting is tucked about their roots to defend them from the frost. It is interesting to see the green of mosses peeping out here and there. You hear only the soft crisped sound of sinking needles under your feet.

I find in the swamp there by the larches the *Kalmia glauca*, good specimens.

I have no doubt that a good farmer, who, of course, loves his work, takes exactly the same kind of pleasure in draining a swamp, seeing the water flow out in his newly cut ditch, that a child does in its mud dikes and water-wheels. Both alike love to play with the natural forces.

There is quite a ravine by which the water of this swamp flows out eastward, and at the bottom of it many prinos berries are conspicuous, now apparently in their prime. These are appointed to be an ornament of this bare season between leaves and snow. The swamp-pink's large yellowish buds, too, are conspicuous now. I see also the swamp pyrus buds, expanded sometimes into small leaves. This, then, is a regular phenomenon. It is the only shrub or tree that I know which so decidedly springs again in the fall, in the Indian summer. It might be called the Indian-summer shrub. The clethra buds, too, are decidedly expanded there, showing leafets, but very small. Some of the new pyrus leaves are nearly full-grown. Would not this be a pretty device on some hale and cheery old man's shield, — the swamp pyrus unfolding its leaves again in the fall? Every plant enjoys some preëminence, and this is its. The most forward to respond to the warmer season. How much spring there is in it! Its sap is most easily liquefied. It takes the least sun and mildness to thaw it and develop it. It makes this annual sacrifice of its very first leaves to its love for the sun. While all other shrubs are reserved, this is open and confiding. I see it not without emotion. I too have my spring thoughts even in November. This I see in pleasant October and November days, when rills and birds begin to tinkle in winter fashion through the more open aisles of the swamps.

I do not know exactly what that sweet word is which the chickadee says when it hops near to me now in those ravines.

The chickadee
Hops near to me.

When the air is thick and the sky overcast, we need not walk so far. We give our attention to nearer objects, being less distracted from them. I take occasion to explore some near wood which my walks commonly overshoot.

What a difference it makes between two ravines in other respects exactly similar that in the one there is a stream which drains it, while the other is dry!

I see nowadays in various places the scattered feathers of robins, etc., where some hawk or beast of prey has torn them to pieces.

I step over the slip-noose snares which some woodling has just set. How long since men set snares for partridges and rabbits?

Ah, my friends, I know you better than you think, and love you better, too. The day after never, we will have an explanation.

Nov. 9. Surveying for Stedman Buttrick and Mr. Gordon.

Jacob Farmer says that he remembers well a particular bound (which is the subject of dispute between the above two men) from this circumstance: He, a boy, was sent, as the representative of his mother, to witness the placing of the bounds to her lot, and he remembers that, when they had fixed the stake and stones, old Mr. Nathan Barrett asked him if he had a knife about him, upon which he pulled out his knife and gave it to him. Mr. Barrett cut a birch switch and

trimmed it in the presence of young Farmer, and then called out, "Boy, here's your knife;" but as the boy saw that he was going to strike him when he reached his hand for the knife, he dodged into a bush which alone received the blow. And Mr. Barrett said that if it had not been for that, he would have got a blow which would have made him remember that bound as long as he lived, and explained to him that that was his design in striking him. He had before told his mother that since she could not go to the woods to see what bounds were set to her lot, she had better send Jacob as a representative of the family. This made Farmer the important witness in this case. He first, some years ago, saw Buttrick trimming up the trees, and told him he was on Gordon's land and pointed out this as the bound between them.

One of the company to-day told of George Melvin once directing Jonas Melvin, for a joke, to go to the widow Hildreth's lot (along which we were measuring) and gather the chestnuts. They were probably both working there. He accordingly took the oxen and cart and some ladders and another hired man, and they worked all day and got half a bushel.

Mr. Farmer tells me that one Sunday he went to his barn, having nothing to do, and thought he would watch the swallows, republican swallows. The old bird was feeding her young, and he sat within fifteen feet, overlooking them. There were five young, and he was curious to know how each received its share; and as often as the bird came with a fly, the one at the door (or opening) took it, and then they all hitched

round one notch, so that a new one was presented at the door, who received the next fly; and this was the invariable order, the same one never receiving two flies in succession. At last the old bird brought a very small fly, and the young one that swallowed it did not desert his ground but waited to receive the next, but when the bird came with another, of the usual size, she commenced a loud and long scolding at the little one, till it resigned its place, and the next in succession received the fly.

Bigelow, the tavern-keeper, once, wrote C., put up this advertisement in the streets of Concord, "All those who are in favor of the universal salvation of mankind, are requested to meet at the school-house (?) next Saturday evening (?), to choose officers."

Very warm to-day; rainy in forenoon.

Nov. 11. Clear and fine Indian-summer day.

P. M. — To Lincoln limestone with E. Hoar.

Hoar showed me last evening the large fossil tooth of a shark, such as figured in Hitchcock, which he bought at Gay Head the other day. He also bought one or more other species.

I heard, day before yesterday, much firing of guns in the chestnut woods by Curly-pate Hill, probably at gray squirrels. George Buttrick says it is late for them; were thickest in chestnut time.

That cellar-hole off northwest of Brooks Clark's is where Boaz Brown used to live, and the andromeda swamp behind is "Boaz's (pronounced Boze's) meadow," says Jacob Farmer, who has seen corn growing in the

meadow. The Lincoln limestone dips east by north, strikes north by west; the hornblende slate (?) on Bare Hill, northeast and northwest.

Nov. 13. Some rain in the night.

I see, on a white oak on Egg Rock, where the squirrels have lately made a nest for the winter of the dry oak leaves, probably using those on the tree before they fell. Now that the top of the oak is bare, this is a dark round mass against the sky, as big as a peck measure, very conspicuous. There are considerable many still hanging on the lower parts. I suspect it is a gray squirrel's nest.

I observed on the 7th, between the site of Paul Adams's and Bateman's Pond, in quite open land, some very prominent Indian corn-hills. I should say that they were higher above the intermediate surface than when they were first made. It was a pasture, and they were thickly covered with grass and lichens. Perhaps the grass had grown better on the hillocks, and so they had grown while the intermediate spaces had been more trodden by the cows. These very regular round grassy hillocks, extending in straight rows over the swells and valleys, had a singular effect, like the burial-ground of some creatures.

I find that I can see the sun set from almost any hill in Concord, and some within the confines of the neighboring towns, and though this takes place at just about 5 P. M., when the cows come in, get to the post-office by the time the mail is distributed. See the sun rise or set if possible each day. Let that be your pill. How

speedily the night comes on now! There is some duskiness in the afternoon light before you are aware of it, the cows have gathered about the bars, waiting to be let out, and, in twenty minutes, candles gleam from distant windows, and the walk for this day is ended. It remains only to get home again. Who is weary? Why do we cease work and go to bed? Who taught men thus to spend their nights and days? Yet I must confess that I am surprised when I find that particular wise and independent persons conform so far as regularly to go to bed and get up about the same time with their neighbors.

My assistants and company in surveying on the 9th were, Gordon and Buttrick, the principals in the dispute; Jacob Farmer, the principal witness; George Buttrick, son of Stedman; and French, son-in-law of Gordon. I had the most to do with Gordon, who came after me. He was quite eloquent at our house on the subject of two neighbors disputing at his time of life about a "pelfry" sum or a few rods of land; seemed really to have a very good heart; thought that the main thing in this life was to keep up friendly relations; and as he rode along, would quote Scripture in a low tone, and put his whole soul into some half-whispered expression which I could not hear, but nevertheless nodded assent to. He thought it was too bad that he should have spent his seventy-third birthday settling that dispute in the woods. Apparently did not know it till afterwards.

Buttrick is a rather large man, in more senses than one. His portly body as he stood over the bound was

the mark at which I sighted through the woods, rather too wide a one for accuracy. He did not cease to regret for a day or two that I should have had no dinner, but Gordon detained me. Buttrick said that he had a piece of meat cooked and expected me at his house. Thought it too bad in Gordon to make a man go without his dinner, etc. He offered me a glass of gin, or wine, as I chose. Lamented the cutting down of apple orchards and scarcity of cider-mills. Told of an orchard in the town of Russell, on the side of a hill, where the apples rolled down and lay four feet deep (?) against a wall on the lower side, and this the owner cut down.

Farmer, half a dozen years since, saw Buttrick trimming up the trees there and observed [to] him, "You are on Mr. Gordon's land." This was the beginning of the trouble. Buttrick adhered to the bounds which Abel Brooks, who sold to him, had pointed out. Farmer was sure of the bounds between them, because when Jacob Brown's Bateman wood-lot was divided between Mrs. Farmer (his mother) and her sister, the mother of Mrs. Gordon, he had witnessed the setting of the bounds as the representative of his mother, and came near being whipped at this one.

Nov. 14. P. M. — Ride to limestone quarries on old Carlisle road with E. Hoar.

This morning it was considerably colder than for a long time, and by noon very much colder than heretofore, with a pretty strong northerly wind. The principal flight of geese was November 8th, so that the bulk of them preceded this cold turn five days. You

need greatcoat and buffalo and gloves now, if you ride. I find my hands stiffened and involuntarily finding their way to my pockets. No wonder that the weather is a standing subject of conversation, since we are so sensitive. If we had not gone through several winters, we might well be alarmed at the approach of cold weather. With this keener blast from the north, my hands suddenly fail to fulfill their office, as it were begin to die. We must put on armor against the new foe. I am almost world-ridden suddenly. I can hardly tie and untie my shoe-strings. What a story to tell an inhabitant of the tropics, — perchance that you went to walk, after many months of warmth, when suddenly the air became so cold and hostile to your nature, that it benumbed you so that you lost the use of some of your limbs, could not untie your shoe-strings or unbutton your clothes! This cold weather makes us step more briskly.[1]

I hear that the Indians say we are to have a hard winter, because of the abundance of acorns, also because of the unusual thickening of corn-husks in the summer!

The stone at those quarries strikes northeasterly and southwesterly, or apparently with the rocks of Curly-pate, a third of a mile off. The strata appear to be nearly vertical. In the most southwesterly quarry, I noticed in the side of an upright sliver of rock, where the limestone had formerly been blasted off, the bottom of the nearly perpendicular hole which had been drilled for that purpose, two or three inches deep and about two and a half feet from the ground. In this

[1] *Vide* forward.

I found two fresh chestnuts, a dozen or more amphicarpæa seeds, as many apparently either prinos (?) or rose (?) seeds (single seeds and fresh), and several fresh barberry seeds mixed with a little earth and rubbish. What placed them there? Squirrel, mouse, jay, or crow? At first I thought that a quadruped could hardly have reached this hole, but probably it could easily, and it was a very cunning place for such a deposit.[1] I brought them all home in order to ascertain what the seeds were and how they came there. Examining the chestnuts carefully in the evening and wondering if so small a bird as a chickadee could transport one, I observed near the larger end of one some very fine scratches, which it seemed to me might have been made by the teeth of a very small animal when carrying it, but certainly not by the bill of a bird, since they had pricked sharply into the shell, rucking it up one way. I then looked to see where the teeth of the other jaw had scratched it, but could discover no marks and was therefore still somewhat in doubt. Coming up-stairs an hour afterward, I examined those scratches with a microscope, and saw plainly that they had been made by some fine and sharp cutting instrument like a fine chisel, a little concave, and had plowed under the surface of the shell a little, toward the big end of the nut, raising it up; and, looking farther, I now discovered, on the larger end of the nut, at least two corresponding marks made by the lower incisors, plowing toward the first and about a quarter of an inch distant. These were a little

[1] *Vide* Nov. 19th.

less obvious to the unarmed eye, but no less plain through the glass. I now had no doubt that they were made by the incisors of a mouse, and, comparing them with the incisors of a deer mouse (*Mus leucopus*) whose skull I have, I found that one or two of the marks were just the width of its two incisors combined (a twentieth of an inch), and the others, though finer, might have been made by them. On one side, at least, it had taken fresh hold once or twice. I have but little doubt that these seeds were placed there by a *Mus leucopus*, our most common wood mouse. The other nut, which had no marks on it, I suppose was carried by the star end, which was gone from both. There was no chestnut tree within twenty rods. These seeds thus placed in this recess will account for chestnut trees, barberry bushes, etc., etc., growing in chinks and clefts where we do not see how the seeds could have fallen. There was earth enough even in this little hole to keep some very small plant alive.

I hear that Gardiner Heywood caught a trout in Walden Pond the other day and that it weighed five pounds.[1]

It seems that the Abel Davis who caught the pickerel in Temple Brook, which would make such a meal for his "Lavinia" and himself, was addicted to talking to himself, thinking aloud. He was once talked of for captain of the company, and about that time, they say, was overheard saying to himself, "Captain Abel Davis! What a fine-looking man!"

[1] And a little over. Speared it about a week ago, and saw another not quite so large. Henry and John Bigelow put a couple into the pond some ten years ago. Were these the ones?

Can those straight ridges running north by west and south by east over the most level part of Curly-pate have anything to do with diluvial furrows?

Returning along the edge of Calla Swamp, under the fern-clad hill, I feel the crunching sound [*sic*] of frost-crystals in the heaving mud under my feet, and see and feel the sphagnum already stiffened into a crust, and what probably in the forenoon was water trickling from a fern-clad rock is now half a dozen icicles, six or eight inches long. Such is the first freezing day. Such phenomena are first observed under the north side of a hill in a cold swamp like this. Such are the first advances of winter. Ice-crystals shoot in the mud, the sphagnum becomes a stiffened mass, and dropping water in these cold places, a rigid icicle.

E. Hoar tells me that his partner, having a new adobe house, or perhaps roof to it, built in Santa Barbara, on the California coast, corrected the bad levelling of his carpenters by taking such a position as to make the ridge-pole coincide with the horizon line where the Pacific appeared to meet the sky.

The thermometer is 27° at 6 P. M. The mud in the street is stiffened under my feet this evening.

Where there is a wall near a pitch pine wood, I see the scales of the cones which the squirrels have carried to the wall and stripped, strewn all along the wall on the ground.

Nov. 15. The obvious falling of leaves (*i. e.*, not to include the fall of the pitch pines and larches and the complete fall of the birches, white willows, etc.) ended

about the first of November. A very few bright-colored leaves on small shrubs, such as oak sprouts, black cherry, blueberry, etc., have lingered up to this time in favorable places. By the first of November, or at most a few days later, the trees generally wear, in the main, their winter aspect, their leaves gradually falling until spring.

P. M. — To Holden Swamp and C. Miles Swamp.

Where the earth has been freshly exposed and so lies light, it is now heaved up and white with asbestos-like crystals two or three inches long, which sink and are crunched by my feet. Cold pools in shady woods and under the north sides of walls are now skimmed over. Ice a quarter of an inch thick. I see its large flaky crystals like low undulations, a mosaic of slightly concave, perhaps triangular pieces. The paths whose surface was frozen each night are now thawing and wet.

The water of the brook beyond Hubbard's Grove, where it spreads out a little, though not frozen, is clear, cold, and deserted of life. There are no water-bugs nor skaters on it. Rennie, in "Library of Entertaining Knowledge," says they are seen all winter on some pools in England, *i. e.* the *Gyrinus natator*. I see no ants on the great ant-hills, and methinks I have not for three weeks at least. There is but little insect-life abroad now. You wonder what nourishment the cattle can extract from the withered and bleached grass. This cold blast has swept the water-bugs from the pools. My walk is the more lonely when I perceive that there are no ants now upon their hillocks in field or wood. These are deserted mounds. They have

commenced their winter's sleep. I break my way into the midst of Holden Swamp to get a specimen of *Kalmia glauca* leaf. The surface is composed of great porous tussocks, or hummocks, of sphagnum, fifteen or twenty inches high or more, about the stems of blueberry bushes, choke-berry, water andromeda, swamp-pink, spruce, etc., etc., in which my feet sink five or six inches, and my shoes are filled with the rubbish. The water is frozen solid in the leaves of the pitcher-plants. This is the thickest ice I've seen. This water was most exposed in the cool swamp. I part the scraggy bushes with my hands and press my way through them. I come out covered with the fragments of lichens and rotten twigs and sphagnum.

Going by my owl-nest oak, I saw that it had broken off at the hole and the top fallen, but, seeing in the cavity some leaves, I climbed up to see what kind of nest it was and what traces of the owls were left. Having shinned up with some difficulty to the top of this great stump some fifteen or eighteen feet high, I took out the leaves slowly, watching to see what spoils had been left with them. Some were pretty green, and all had evidently been placed there this fall. When I had taken all out with my left hand, holding on to the top of the stump with my right, I looked round into the cleft, and there I saw, sitting nearly erect at the bottom in one corner, a little *Mus leucopus*, panting with fear and with its large black eyes upon me. I held my face thus within seven or eight inches of it as long as I cared to hold on there, and it showed no sign of retreating. When I put in my hand, it merely withdrew

downward into a snug little nest of hypnum and apparently the dirty-white wool-like pappus of some plant as big as a batting-ball. Wishing to see its tail, I stirred it up again, when it suddenly rushed up the side of the cleft, out over my shoulder and right arm, and leaped off, falling down through a thin hemlock spray some fifteen or eighteen feet to the ground, on the hillside, where I lost sight of it, but heard it strike. It will thus make its nest at least sixteen feet up a tree, improving some cleft or hollow, or probably bird's nest, for this purpose. These nests, *I suppose*, are made when the trees are losing their leaves, as those of the squirrels are.

At C. Miles Swamp, I see that the larches have finished falling since the 8th (say the 12th?). Find plenty of *Andromeda Polifolia* there, where you can walk dry-shod in the spruce wood, together with *Kalmia glauca*. The former is linear, about twice as long and two thirds as broad as the latter, alternate mucronate, round-stemmed. The *Kalmia glauca* has fewer leaves now, opposite, glossy above; a very sharp two-edged twig, the edges springing from the base of the leaves and decussating like them, so that when the twig is held up to the light it appears alternately thicker and thinner. This plant is commonly seen now with only a few narrow and erect young leaves in a tuft near the end of the twigs, but in many cases older, broader, and nearly horizontal ones, half a dozen of them along the last four or five inches of the twig. The andromeda is most white beneath; the other is more greenish.

The white willows, which retain many of their leaves even yet, are of a peculiar buff (?) or fawn (?) color.

Raspberry shoots, too, have their bloom like the thimble-berry, but they are not so rank nor smooth.

Of the evergreen trees described by Loudon, methinks these it would be worth the while to have on one's premises: —

Pinus sylvestris, Scotch pine or fir; the most valuable pine of Europe. Looks like our pitch pine.

Pinus Pinaster, which is planted on the sands in France.

Abies excelsa, the lofty or Norway spruce fir.

Perhaps *Picea pectinata*, the comb-like-leaved silver fir.

The Scotch larch, which is not indigenous in Britain, but on the mountains of the middle of Europe. I have,

Of western American trees: —

The *Pinus Lambertiana*, the gigantic or Lambert's pine, Columbia River, one hundred and fifty to two hundred feet high, twenty to near sixty in circumference, allied closely to *P. Strobus*.

Abies Douglassii, northwestern America, one hundred to one hundred and eighty feet high.

Picea grandis, great silver fir, northern California, one hundred and seventy to two hundred feet high.

Nov. 17. Rain last night.

Nov. 18. P. M. — To Dam Meadows.

Going along the Bedford road at Moore's Swamp, I hear the dry rustling of seedy rattlesnake grass in the wind, a November sound, within a rod of me.

The sunlight is a peculiarly thin and clear yellow, falling on the pale-brown bleaching herbage of the fields at this season. There is no redness in it. This is November sunlight. Much cold, slate-colored cloud, bare twigs seen gleaming toward the light like gossamer, pure green of pines whose old leaves have fallen, reddish or yellowish brown oak leaves rustling on the hillsides, very pale brown, bleaching, almost hoary fine grass or hay in the fields, akin to the frost which has killed it, and flakes of clear yellow sunlight falling on it here and there, — such is November.

The fine grass killed by the frost, withered and bleached till it is almost silvery, has clothed the fields for a long time.

Now, as in the spring, we rejoice in sheltered and sunny places. Some corn is left out still even.

What a mockery to turn cattle out into such pastures! Yet I see more in the fields now than earlier.

I hear a low concert from the edge of Gowing's Swamp, amid the maples, etc., — suppressed warblings from many flitting birds. With my glass I see only tree sparrows, and suppose it is they.

What I noticed for the thousandth time on the 15th was the waved surface of thin dark ice just frozen, as if it were a surface composed of large, perhaps triangular pieces raised at the edges; *i. e.*, the filling up between the original shooting of the crystals — the midribs of the icy leaves — is on a lower plane.

Flannery is the hardest-working man I know. Before sunrise and long after sunset he is taxing his unweariable muscles. The result is a singular cheerfulness. He is always in good spirits. He often overflows with his joy when you perceive no occasion for it. If only the gate sticks, some of it bubbles up and overflows in his passing comment on that accident. How much mere industry proves! There is a sparkle often in his passing remark, and his voice is really like that of a bird.

Crows will often come flying much out of their way to caw at me.

In one light, these are old and worn-out fields that I ramble over, and men have gone to law about them long before I was born, but I trust that I ramble over them in a new fashion and redeem them.

I noticed on the 15th that that peculiar moraine or horseback just this side of J. P. Brown's extends southerly of Nut Meadow Brook in the woods, maybe a third or a half a mile long in all.

The rocks laid bare here and there by ditching in the Dam Meadows are very white, having no lichens on them.

The musquash should appear in the coat of arms of some of the States, it is so common. I do not go by any permanent pool but, sooner or later, I hear its plunge there. Hardly a bit of board floats in any ditch or pondhole but this creature has left its traces on it.

How singularly rivers in their sources overlap each other! There is the meadow behind Brooks Clark's and at the head of which Sted Buttrick's handsome

maple lot stands, on the old Carlisle road. The stream which drains this empties into the Assabet at Dove Rock. A short distance west of this meadow, but a good deal more elevated, is Boaz's meadow, whose water finds its way, naturally or artificially, northeastward around the other, crossing the road just this side the lime-kiln, and empties into the Saw Mill Brook and so into the main river.

There are many ways of feeling one's pulse. In a healthy state the constant experience is a pleasurable sensation or sentiment. For instance, in such a state I find myself in perfect connection with nature, and the perception, or remembrance even, of any natural phenomena is attended with a gentle pleasurable excitement. Prevailing sights and sounds make the impression of beauty and music on me. But in sickness all is deranged. I had yesterday a kink in my back and a general cold, and as usual it amounted to a cessation of life. I lost for the time my *rapport* or relation to nature. Sympathy with nature is an evidence of perfect health. You cannot perceive beauty but with a serene mind. The cheaper your amusements, the safer and saner. They who think much of theatres, operas, and the like, are beside themselves. Each man's necessary path, though as obscure and apparently uneventful as that of a beetle in the grass, is the way to the deepest joys he is susceptible of; though he converses only with moles and fungi and disgraces his relatives, it is no matter if he knows what is steel to his flint.

Many a man who should rather describe his dinner imposes on us with a history of the Grand Khan.

Nov. 19. P. M. — To Cliffs.

In Stow's sprout-land west of railroad cut, I see where a mouse which has a hole under a stump has eaten out clean the insides of the little *Prinos verticillatus* berries. These may be the doubtful seeds of the 14th. What pretty fruit for the mice, these bright prinos berries! They run up the twigs in the night and gather this shining fruit, take out the small seeds, and eat their kernels at the entrance to their burrows. The ground is strewn with them there.

Turning up a stone on Fair Haven Hill, I find many small dead crickets about the edges, which have endeavored to get under it and apparently have been killed by the frost; quite under it and alive, two or three small purplish-brown caterpillars; and many little ants, quite active, with their white grubs, in spacious galleries, somewhat semicylindrical, whose top often was the bottom of the stone. You would think they had been made by a worm.

Going along close under the Cliffs, I see a dozen or more low blackberry vines dangling down a perpendicular rock at least eight feet high, and blown back and forth, with leaves every six inches, and one or two have reached the ground and taken firm root there. There are also many of the common cinquefoil with its leaves five inches asunder, dangling down five or six feet over the same rock. I see many acorn and other nut shells which in past years have been tucked into clefts in the rocks.

Nov. 20. High wind in the night, shaking the house, apparently from the northwest.

About 9.30 A. M., though there is very little cloud, I see a few flakes of snow, two or three only, like flocks of gossamer, straggling in a slanting direction to the ground, unnoticed by most, in a rather raw air. At ten there is a little more. The children in the next yard have seen it and are excited. They are searching to see if any rests on the ground.

In books, that which is most generally interesting is what comes home to the most cherished private experience of the greatest number. It is not the book of him who has travelled the farthest over the surface of the globe, but of him who has lived the deepest and been the most at home. If an equal emotion is excited by a familiar homely phenomenon as by the Pyramids, there is no advantage in seeing the Pyramids. It is on the whole better, as it is simpler, to use the common language. We require that the reporter be very permanently planted before the facts which he observes, not a mere passer-by; hence the facts cannot be too homely. A man is worth most to himself and to others, whether as an observer, or poet, or neighbor, or friend, where he is most himself, most contented and at home. There his life is the most intense and he loses the fewest moments. Familiar and surrounding objects are the best symbols and illustrations of his life. If a man who has had deep experiences should endeavor to describe them in a book of travels, it would be to use the language of a wandering tribe instead of a universal language. The poet has made the best roots in his native soil of any man, and is the hardest to transplant. The man

who is often thinking that it is better to be somewhere else than where he is excommunicates himself. If a man is rich and strong anywhere, it must be on his native soil. Here I have been these forty years learning the language of these fields that I may the better express myself. If I should travel to the prairies, I should much less understand them, and my past life would serve me but ill to describe them. Many a weed here stands for more of life to me than the big trees of California would if I should go there. We only need travel enough to give our intellects an airing. In spite of Malthus and the rest, there will be plenty of room in this world, if every man will mind his own business. I have not heard of any planet running against another yet.

P. M. — To Ministerial Swamp.

Some bank swallows' nests are exposed by the caving of the bank at Clamshell. The very smallest hole is about two and a half inches wide horizontally, by barely one high. All are much wider than high (vertically). One nest, with an egg in it still, is completely exposed. The cavity at the end is shaped like a thick hoe-cake or lens, about six inches wide and two plus thick, vertically. The nest is a regular but shallow one made simply of stubble, about five inches in diameter, and three quarters of an inch deep.

I see many pollywogs in cold pools now.

I enter the Ministerial Swamp at the road below Tarbell's. The water andromeda leaves are brown now, except where protected by trees. In some places

where many of the bright-crimson shoots of high blueberry are seen together, they have a very pretty effect, a crimson vigor to stand above the snow. Where the larches stand thick with their dark boles and stems, the ground is thickly strewn with their fine and peculiarly dark brown leaves, chaff-like, *i. e.* darker than those of other *pines*, perhaps like black walnut or cherry shavings. As where other evergreens stand thick, little or nothing grows beneath. I see where squirrels (apparently) have eaten and stripped the spruce cones. I distinguished where the earth was cast out in cutting ditches through this swamp long ago, and this earth is covered and concealed with a thick growth of cup and cockscomb lichens. In this light-lying earth, in one place, I see where some creature some time ago has pawed out much comb of some kind of bee (probably for the honey?), making a hole as big as my head, and this torn comb lies about.

Returning through Harrington's land, I see, methinks, two gentlemen plowing a field, as if to try an agricultural experiment, — for, it being cold and windy, both plowman and driver have their coats on, — but when I get closer, I hear the driver speak in a peculiarly sharp and petulant manner to the plowman as they are turning the land furrow, and I know at once that they belong to those two races which are so slow to amalgamate. Thus my little idyl is disturbed.

I see a partridge on the ground under a white oak by Tarbell's black birches, looking just like a snag.

This is the second time I have seen them in such a place. Are they not after acorns?

In the large Tommy Wheeler field, *Ranunculus bulbosus* in full bloom!

I hear again the soft rippling of the Assabet under those black birches, which Tappan once remarked on. It is not so steep a fall as to be hoarse.

The hardy tree sparrow has taken the place of the chipping and song sparrow, so much like the former that most do not know it is another. His faint lisping chip will keep our spirits up till another spring.

I observed this afternoon how some bullocks had a little sportiveness forced upon them. They were running down a steep declivity to water, when, feeling themselves unusually impelled by gravity downward, they took the hint even as boys do, flourished round gratuitously, tossing their hind quarters into the air and shaking their heads at each other, but what increases the ludicrousness of it to me is the fact that such capers are never accompanied by a smile. Who does not believe that their step is less elastic, their movement more awkward, for their long domesticity?

Nov. 21.[1] P. M. — Up Assabet.

Paddling along, a little above the Hemlocks, I hear, I think, a boy whistling upon the bank above me, but immediately perceive that it is the whistle of the locomotive a mile off in that direction. I perceived that it was distant, and therefore the locomotive, the moment that the key was changed from a very high

[1] Dates between Nov. 17th and 21st doubtful, a day or two.

to a low one. Was it because distant sounds are commonly on a low key?

Just above the grape-hung birches, my attention was drawn to a singular-looking dry leaf or parcel of leaves on the shore about a rod off. Then I thought it might be the dry and yellowed skeleton of a bird with all its ribs; then the shell of a turtle, or possibly some large dry oak leaves peculiarly curved and cut; and then, all at once, I saw that it was a woodcock, perfectly still, with its head drawn in, standing on its great pink feet. I had, apparently, noticed only the yellowish-brown portions of the plumage, referring the dark-brown to the shore behind it. May it not be that the yellowish-brown markings of the bird correspond somewhat to its skeleton? At any rate with my eye steadily on it from a point within a rod, I did not for a considerable time suspect it to be a living creature. Examining the shore after it had flown with a whistling flight, I saw that there was a clear space of mud between the water and the edge of ice-crystals about two inches wide, melted so far by the lapse of the water, and all along the edge of the ice, for a rod or two at least, there was a hole where it had thrust its bill down, probing, every half-inch, frequently closer. Some animal life must be collected at that depth just in that narrow space, savory morsels for this bird.

I was paddling along slowly, on the lookout for what was to be seen, when my attention was caught by a strange-looking leaf or bunch of leaves on the shore, close to the water's edge, a rod distant. I thought to

myself, I may as well investigate that, and so pushed slowly toward it, my eyes resting on it all the while. It then looked like a small shipwrecked hulk and, strange to say, like the bare skeleton of a fowl that has been picked and turned yellowish, resting on its breast-bone, the color of a withered black or red oak leaf. Again I thought it must be such a leaf or cluster of leaves peculiarly curved and cut or torn on the upper edges.

The chubby bird dashed away zigzag, carrying its long tongue-case carefully before it, over the witch-hazel bushes. This is its walk, — the portion of the shore, the narrow strip, still kept open and unfrozen between the water's edge and the ice. The sportsman might discover its neighborhood by these probings.

Nov. 23. *Monday.* P. M. — To Gowing's Swamp.

Garfield, who was working in what was Moore's Swamp, tells me that he sometimes digs up frogs in the winter, when ditching in springy places, one at a time. He is very much troubled by the short-tailed meadow mouse in that meadow. They live under the stumps, and gnaw his potatoes in the fall. He thought that his little dog, a terrier, had killed a bushel of them the past year.

At the back of Gowing's hillside, just west of his swamp, in the midst of shrub oaks and other dry upland trees, the ground slopes regularly on all sides to a deep round hollow, perhaps fifteen feet lower than the lowest side and thirty feet in diameter at the bot-

tom. The bottom is rather wet and covered with sphagnum, and many stiff and dead-looking button-bushes stand in it, while all around a dense high hedge of high blueberry curves over it. So sudden a change there will be in the vegetation with a change of soil. Many such a dimple with its peculiar vegetations have I seen in a dry wood-lot. The *Vaccinium corymbosum* and panicled andromeda in a dense hedge, in a circular or oval or other curved form, surrounding and slanting over it so as almost to conceal it; and in the same manner the blueberry, etc., will grow around and overhang the largest ponds.

Walked through Gowing's Swamp from west to east. You may say it is divided into three parts, — first, the thin woody; second, the coarse bushy or gray; and third, the fine bushy or brown.

First: The trees are larch, white birch, red maple, spruce, white pine, etc.

Second: The coarse bushy part, or blueberry thicket, consists of high blueberry, panicled andromeda, *Amelanchier Canadensis* var. *oblongifolia*, swamp-pink, choke-berry, *Viburnum nudum*, rhodora, (and probably prinos, holly, etc., etc., not distinguishable easily now), but chiefly the first two. Much of the blueberry being dead gives it a very gray as well as scraggy aspect. It is a very bad thicket to break through, yet there are commonly thinner places, or often opens, by which you may wind your way about the denser clumps. Small specimens of the trees are mingled with these and also some water andromeda and lambkill.

Third: There are the smooth brown and wetter spaces where the water andromeda chiefly prevails, together with purplish lambkill about the sides of them, and hairy huckleberry; but in the midst and wettest part the narrow revolute and glaucous (beneath) leaves of the *Andromeda Polifolia* and *Kalmia glauca* are seen, and in the sphagnum the *Vaccinium Oxycoccus*. In one of the latter portions occurs that open pool.

Sphagnum is found everywhere in the swamp.

First, there is the dark wooded part; second, the scraggy gray blueberry thicket; third, the rich brown water andromeda spaces.

The high blueberry delights singularly in these localities. You distinguish it by its gray spreading mass; its light-gray bark, rather roughened; its thickish shoots, often crimson; and its plump, roundish red buds. Think of its wreaths and canopies of cool blue fruit in August, thick as the stars in the Milky Way! The panicled andromeda is upright, light-gray, with a rather smoother bark, more slender twigs, and small, sharp red buds lying close to the twig. The blueberry is particularly hard to break through, it is so spreading and scraggy, but a hare can double swiftly enough beneath it. The ground of sphagnum is now thickly strewn with the leaves of these shrubs.

The water andromeda makes a still more uniformly dense thicket, which must be nearly impervious to some animals; but as man lifts his head high above it, [he] finds but little difficulty in making his way through

it, though it sometimes comes up to his middle, and if his eye scans its surface it makes an impression of smoothness and denseness, — its rich brown, wholesome surface, even as grass or moss.

Ascending the high land on the south, I looked down over the large open space with its *navel* pool in the centre. This green stagnant pool, rayed with the tracks or trails of musquash and making but a feeble watery impression, reminded me of portions of the map of the moon.

This swamp appears not to have had any natural outlet, though an artificial one has been dug. The same is perhaps the case with the C. Miles Swamp. And is it so with Beck Stow's? These three are the only places where I have found the *Andromeda Polifolia.* The *Kalmia glauca* in Gowing's, C. Miles's, and Holden's swamps. The latter has no outlet of any kind.

I am interested in those plants, like panicled andromeda, shrub oak, etc., for which no use that I know has been discovered. The panicled andromeda, instead of the date tree, might be my coat-of-arms.

Fresh slender shoots of the *Viburnum nudum* make very good withes, I find.

Austin Bacon told me that the worst swamp he ever found was not in Vermont or up country where he had surveyed, but in Newton (?), where he surveyed for a road once. The water was about two feet deep, and you jumped from tussock to tussock; these generally tipped over with you into the water.

There is a strong and warm southwest wind, which brings the frost out of the ground, — more than I thought was in it, — making the surface wet.

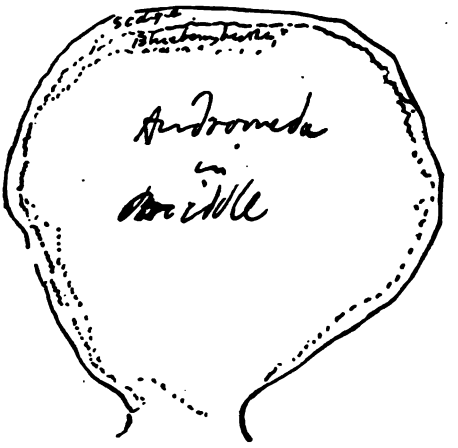
Walking along the top of Gowing's hill wood-lot, I see from time to time large ant-hills amid the young oaks. Often their tops have been disturbed and flattened, by some creature apparently. Some may be deserted. The sedge-grass has sprung up long and thick about the sides of these mounds, though there may be none amid the oaks around. The working of the ants keeps clear a little space amid the bushes.

In the evening heavy rain and some thunder and lightning, and rain in the night.

Nov. 24. P. M. — To Andromeda Ponds.

Cold Thanksgiving weather again, the pools freezing. The first or northernmost Andromeda Pond, considering the main portion north of the isthmus, is surrounded, except at the isthmus, by dry hills, twenty-five to forty [feet] high perhaps, covered with young oaks. Its interior, or far the greater part of the whole, is filled with a uniformly dense and level bed of brown andromeda, in which I detect nothing else from the hills except some white cotton-grass waving over it. Between the andromeda and the hills, there is a border, from one to two rods wide, of coarse and now yellowish sedge all the way round, except, of course, at the isthmus, and part of the way, just within the edge of the andromeda, mixed with it, a second inner border of gray bushes, chiefly, I suppose, blueberry,

etc., with a few small birches, maples, pines, etc. As I remember, it lies *somewhat* thus: —



The southerly continuation of this and the other two ponds are much more wet, — have open water and less andromeda, much more sedge in proportion. Why does the sedge grow thus around the andromeda in a regular ring next the hill? I think it is because it is more wet there. It would be open water there all the way round if it were not for the sedge, but I could walk through the andromeda if I could get to it. Why should it be more wet there? I do not know, unless the springs are at the base of the hills. The sedge can evidently bear more water than the andromeda, and the andromeda than the blueberry bushes, etc. Perhaps the sedge prepares the ground for the andromeda sometimes, furnishing a base and support for it. I see the latter, as it were, making its way out thinly into the

sedge here and there. Perhaps the sedge once covered the whole or greater part. The sphagnum, *apparently*, having some slight solid core to grow around, like an andromeda or blueberry stem, builds itself up a foot or more and may make a soil for noble plants thus.

On the dry hillside next the water, there is another belt, *i. e.* of lambkill, pretty dense, running apparently quite round the pond a rod or more in width. Probably it occurs very far off, or high, thinly, but here it is a thick growth and has relation to the swamp.

According to this, then, you have clear open water, but shallow; then, in course of time, a shallow lake with much sedge standing in it; then, after a while, a dense andromeda bed with blueberry bushes and perhaps a wet border of sedge (as here at present); and finally, a maple swamp.

Spruce and larch appear to flourish very well at the same time with the andromeda.

Looking toward the sun, the andromeda in front of me is a very warm red brown and on either side of me, a pale silvery brown; looking from the sun, a uniform pale brown.

Perhaps the *Andromeda Polifolia* and *Kalmia glauca* prefer stagnant water.

These andromeda swamps charmed me more than twenty years ago, — I knew not why, — and I called them "a moccasin-print."

The *Fringilla hyemalis* appear to be flitting about in a more lively manner on account of the cold. They go off with a twitter from the low weeds and bushes. Nowadays birds are so rare I am wont to mistake them

at first for a leaf or mote [?] blown off from the trees or bushes.

Some poets have said that writing poetry was for youths only, but not so. In that fervid and excitable season we only get the impulse which is to carry us onward in our future career. Ideals are then exhibited to us distinctly which all our lives after we may aim at but not attain. The mere vision is little compared with the steady corresponding endeavor thitherward. It would be vain for us to be looking ever into promised lands toward which in the meanwhile we were not steadily and earnestly travelling, whether the way led over a mountain-top or through a dusky valley. In youth, when we are most elastic and there is a spring to us, we merely receive an impulse in the proper direction. To suppose that this is equivalent to having travelled the road, or obeyed the impulse faithfully throughout a lifetime, is absurd. We are shown fair scenes in order that we may be tempted to inhabit them, and not simply tell what we have seen.

Nov. 25. P. M. — To Hubbard's Close and thence through woods to Goose Pond and Pine Hill.

A clear, cold, windy afternoon. The cat crackles with electricity when you stroke her, and the fur rises up to your touch.

This is November of the hardest kind, — bare frozen ground covered with pale-brown or straw-colored herbage, a strong, cold, cutting northwest wind which makes me seek to cover my ears, a perfectly clear and cloudless sky. The cattle in the fields have a cold,

shrunken, shaggy look, their hair standing out every way, as if with electricity, like the cat's. Ditches and pools are fast skimming over, and a few slate-colored snowbirds, with thick, shuffling twitter, and fine-chipping tree sparrows flit from bush to bush in the otherwise deserted pastures. This month taxes a walker's resources more than any. For my part, I should sooner think of going into quarters in November than in the winter. If you do feel any fire at this season out of doors, you may depend upon it, it is your own. It is but a short time, these afternoons, before the night cometh, in which no man can walk. If you delay to start till three o'clock, there will be hardly time left for a long and rich adventure, — to get fairly out of town. November Eat-heart, — is that the name of it? [1] Not only the fingers cease to do their office, but there is often a benumbing of the faculties generally. You can hardly screw up your courage to take a walk when all is thus tightly locked or frozen up and so little is to be seen in field or wood. I am inclined to take to the swamps or woods as the warmest place, and the former are still the openest. Nature has herself become like the few fruits which she still affords, a very thick-shelled nut with a shrunken meat within. If I find anything to excite or warm my thoughts abroad, it is an agreeable disappointment, for I am obliged to go abroad willfully and against my inclinations at first. The prospect looks so barren, so many springs are frozen up, not a flower perchance and but few birds left, not a companion abroad in all these fields for me, I am slow to go forth. I seem to antici-

[1] [Channing, p. 107.]

pate a fruitless walk. I think to myself hesitatingly, Shall I go there, or there, or there? and cannot make up my mind to any route, all seem so unpromising, mere surface walking and fronting the cold wind, so that I have to force myself to it often and at random. But then I am often unexpectedly compensated, and the thinnest yellow light of November is more warming and exhilarating than any wine they tell of; and then the mite which November contributes becomes equal in value to the bounty of July. I may meet with something which interests me, and immediately it is as warm as in July, as if it were the south instead of the northwest wind that blowed.

I do not know if I am singular when I say that I believe there is no man with whom I can associate who will not, comparatively speaking, spoil my afternoon. That society or encounter may at last yield a fruit which I am not aware of, but I cannot help suspecting that I should have spent those hours more profitably alone.

Pools under the north sides of hills are frozen pretty thick. That cold one of Stow's is nearly an inch and a half thick. It is already dusty, though the ice is but a day or two old. That of Jarvis's, opposite Breed's, is also skimmed over thinly, but Goose Pond very little way as yet. The main crystals of this new ice remind me where massed together sometimes of spiny cactus leaves. Meeting each other, they inclose figures of a more or less triangular form rather than squarish. Sometimes many are closely parallel, half an inch apart, and in favorable lights you see a resemblance to large feathers. Sometimes those large spiny crystals ray

from a centre, star-like, somewhat like the folds of a garment taken up by a point. The plaited ice. Also you may say the waved ice, — still speaking of the first thin ice of the season.

I notice a thimble-berry vine forming an arch four feet high, which has firmly rooted itself at the small end.

The roar of the wind in the trees over my head sounds as cold as the wind feels.

I come to what seems an old ditch a dozen feet long, in Hubbard's Close. It is skinned over, but I see where a spring wells up from its bottom under the ice. When I come to it, small *black-looking* fishes (?), four or five inches long, apparently trout, dart about it with incredible velocity, trying to escape or to bury themselves in the mud. It is some time before all have succeeded in burying themselves to their minds, but when I shake the bog they start again.

Ascending the hill on the east of the Close, I find, in the pine wood on its top, some fragments of a frozen white fungus or toadstool, which apparently a squirrel has eaten, for he has also dropped some at the base of a pine. These look almost exactly like asbestos, so white and stringy to the eye.

Methinks there has been more pine-sap than usual the past summer. I never saw a quarter part so much. It stands there withered in dense brown masses, six or eight inches high, partly covered with dead leaves. The tobacco-pipes are a darker brown.

You see here and there, under pitch pines, bits of gray bark which have fallen, reminding you very strongly of the scaly armor, perhaps, of fossil fishes or other

creatures. I see, under a large white pine, three quarts at least of scales in a heap, where a squirrel has sat on the instep of the tree and stripped the cones. Further in Ebby Hubbard's wood, I see a great two-storied mass of black spunk which has fallen.

I shiver about awhile on Pine Hill, waiting for the sun to set. Methinks the air is dusky soon after four these days. The landscape looks darker than at any season, — like arctic scenery. There is the sun a quarter of an hour high, shining on it through a perfectly clear sky, but to my eye it is singularly dark or dusky. And now the sun has disappeared, there is hardly less light for half a minute. I should not know when it was down, but by looking for [it] as I stand at this height.

Returning, I see a fox run across the road in the twilight from Potter's into Richardson's woods. He is on a canter, but I see the whitish tip of his tail. I feel a certain respect for him, because, though so large, he still maintains himself free and wild in our midst, and is so original so far as any resemblance to our race is concerned. Perhaps I like him better than his tame cousin the dog for it.

It is surprising how much, from the habit of regarding writing as an accomplishment, is wasted on form. A very little information or wit is mixed up with a great deal of conventionalism in the style of expressing it, as with a sort of preponderating paste or vehicle. Some life is not simply expressed, but a long-winded speech is made, with an occasional attempt to put a little life into it.

Nov. 26.[1] Speaking of those long, dry, barren hollows in the Richardson wood-lot with Ebby Hubbard, he says that the reason why no trees have sprung up in them is because the trees were very old when they were cut, and no sprouts came up from the stumps. Otherwise the lowest ground is the best-timbered. I have referred it to frost.

Rice tells me he remembers that Nathan Barrett's father used to stutter. He went round collecting the direct taxes soon after the Revolution, — on carriages, watches, dogs, etc., etc. It was perhaps a dollar on a dog. Coming to Captain Bent's, who kept tavern in Sudbury where Israel Rice lives, he collected his tax and then said, "I want you to may-ma-ma-ma-make me a ha-ha-ha-ha-ha — to make me a ha-ha-ha — a *whole* mug o' flip."

Got my boat up this afternoon. (It is Thanksgiving Day.) One end had frozen in. I see that already some eager urchins have been able to try their skates on a short and narrow strip of ice by the riverside there.

Minott's is a small, square, one-storied and unpainted house, with a hipped roof and at least one dormer-window, a third the way up the south side of a long hill which is some fifty feet high and extends east and west. A traveller of taste may go straight through the village without being detained a moment by any dwelling, either the form or surroundings being objectionable, but very few go by this house without being agreeably impressed, and many are therefore led to inquire

[1] [The manuscript journal volume which begins here has "The Open Winter" on its first fly-leaf.]

who lives in it. Not that its form is so incomparable, nor even its weather-stained color, but chiefly, I think, because of its snug and picturesque position on the hillside, fairly lodged there, where all children like to be, and its perfect harmony with its surroundings and position. For if, preserving this form and color, it should be transplanted to the meadow below, nobody would notice it more than a schoolhouse which was lately of the same form. It is there because somebody was independent or bold enough to carry out the happy thought of placing it high on the hillside. It is the locality, not the architecture, that takes us captive. There is exactly such a site, only of course less room on either side, between this house and the next westward, but few if any, even of the admiring travellers, have thought of this as a house-lot, or would be bold enough to place a cottage there.

Without side fences or gravelled walks or flower-plats, that simple sloping bank before it is pleasanter than any front yard, though many a visitor — and many times the master — has slipped and fallen on the steep path. From its position and exposure, it has shelter and warmth and dryness and prospect. He overlooks the road, the meadow and brook, and houses beyond, to the distant woods. The spring comes earlier to that dooryard than to any, and summer lingers longest there.

Nov. 27. Mr. Wesson says that he has seen a striped squirrel eating a white-bellied mouse on a wall — had evidently caught [it]; also that the little dipper is not

a coot, — but he appears not to know a coot, and did not recognize the lobed feet when I drew them. Says the little dipper has a bill like a hen, and will not dive at the flash so as to escape, as he has proved.[1] Says that a loon can run but little way and very awkwardly, falling on its belly, and cannot rise from the ground. Makes a great noise running on the water before it rises.

Standing before Stacy's large glass windows this morning, I saw that they were gloriously ground by the frost. I never saw such beautiful feather and fir-like frosting. His windows are filled with fancy articles and toys for Christmas and New-Year's presents, but this delicate and graceful outside frosting surpassed them all infinitely. I saw countless feathers with very distinct midribs and fine pinnæ. The half of a trunk seemed to rise in each case up along the sash, and these feathers branched off from it all the way, sometimes nearly horizontally. Other crystals looked like pine plumes the size of life. If glass could be ground to look like this, how glorious it would be!

You can tell which shopman has the hottest fire within by the frost being melted off. I was never so struck by the gracefulness of the curves in vegetation, and wonder that Ruskin does not refer to frostwork.

P. M. — Rode to the kiln and quarry by William Farrar's, Carlisle, and to gorge behind Melvin's.

The direction of the strata at this quarry is like that of Curly-pate and the Easterbrooks quarries, east-

[1] *Vide* Dec. 26, 1857.

northeast by west-southwest, though the latter are very nearly two miles southeast.

Was struck by the appearance of a small hickory near the wall, in the rocky ravine just above the trough. Its trunk was covered with loose scales unlike the hickories near it and as much as the shagbark; but probably it is a shaggy or scaly-barked variety of *Carya glabra*. It may be well to observe it next fall. The husk is not thick, like that of the shagbark, but quite thin, and splits into four only part way down. The shell is not white nor sharply four-angled like the other, but it is rather like a pignut.

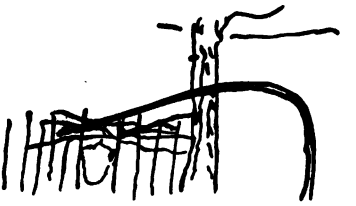
The stratification trends there as at Curly-pate, or perhaps more north and south.

That trough placed on the side of the rocky valley to catch the trickling spring for the sake of the cattle, with a long slab cover to the trough that leads to it to fend off the feet of cattle that come to drink, is an agreeable object and in keeping with the circumstances, amid the hickories and perhaps ash trees. It reminds me of life sometimes in the pasture, — that other creatures than myself quench their thirst at this hillside.

I think that Ruskin is wrong about reflections in his "Elements of Drawing," page 181. He says the reflection is merely the substance "reversed" or "topsy-turvy," and adds, "Whatever you can see from the place in which you stand, of the solid objects so reversed under the water, you will see in the reflection, always in the true perspective of the solid objects so reversed."

Nov. 28. P. M. — Around Ebby Hubbard's woodlot.

On the hillside above his swamp, near the Ministerial land, I found myself walking in one of those shelf-like hillside paths made by Indians, hunters, cows, or what-not, and it was beset with fresh snares for partridges, this wise: Upright twigs are stuck in the ground across the path, a foot or more in height and just close enough together to turn



a partridge aside, leaving a space about four inches wide in the middle, and some twigs are stretched across above to prevent the birds hopping over. Then a sapling about an inch in diameter or less is bent over, and the end caught under one of the twigs which has a notch or projection on one side, and a free-running noose, attached to the sapling, hangs in the opening and is kept spread by being hung on some very slight nicks in the two twigs. This seems to suppose the bird to be going one way only, but perhaps if it cannot escape one way it will turn and try to go back, and so spring the trap.

I saw one that was sprung with nothing in it, another whose slip-noose was blown or fallen one side, and another with a partridge still warm in it. It was a male bird hanging dead by the neck, just touching its toes to the ground. It had a collar or ruff about its neck, of large and conspicuous black feathers with a green reflection. This black is peculiar to the male, the female's being brown. Its feet, now clinched in its agony,

were the strangest-looking pale blue, with a fine fringe, of scales or the like, on each side of each toe. The small black feathers were centred with gray spots. The scapulars were darker brown, dashed with large clear pale-brown spots; the breast-feathers light with light-brown marks. The tail-feathers had each a broad black bar, except the middle one, which was more mixed or grayish there. The bands of the females are said to be more brown, as is their collar. There were a few droppings of the bird close by the snare in two instances. Were they dropped after it was caught? Or did they determine the locality of the snare?

These birds appear to run most along the sides of wooded banks around swamps. At least these paths and snares occur there oftenest. I often scare them up from amid or near hemlocks in the woods.

The general color of the bird is that of the ground and dry leaves on it at present. The bird hanging in the snare was very inconspicuous. I had gone close by it once without noticing it. Its wings are short and stout and look as if they were a little worn by striking the ground or bushes, or perhaps in drumming. I observed a bare bright-red or scarlet spot over each eye.

Spoke to Skinner about that wildcat which he says he heard a month ago in Ebby Hubbard's woods. He was going down to Walden in the evening, to see if geese had not settled in it (with a companion), when they heard this sound, which his companion at first thought made by a coon, but S. said no, it was a wildcat. He says he has heard them often in the Adiron-

dack region, where he has purchased furs. He told him he would hear it again soon, and he did. Somewhat like the domestic cat, a low sort of growling and then a sudden quick-repeated caterwaul, or *yow yow yow*, or *yang yang yang*. He says they utter this from time to time when on the track of some prey.

Nov. 29. Sophia called on old lady Hayden yesterday, and she told her of somebody's twin infants of whom one died for want of air. The father, therefore, was advised to take the survivor with him each morning to the barn, and hold it up to the muzzle of each of the cattle in succession as they got up, that it might catch their first morning breath, and then lay it on the hay while he foddered them. He did so, and there never was a healthier child than this, three months afterward.

P. M. — To Assabet Bath and down bank.

This and yesterday remarkably warm days. In John Hosmer's low birch sprout-land, a few rods beyond Tortoise Hollow, or Valley, I find, on raking aside the withered leaves on the ground, one of those fuzzy caterpillars, black at each end and rust-colored in middle, curled up in a ring, — the same kind that I find on the ice and snow, frozen, in winter. I think that the river *might* rise so high as to wash this out of the withered grass and leaves here. Soon after I find another in a catbird's nest, nearly three feet from the ground, in a thorn, together [with] half a nestful of freshly nibbled acorn shells and a few hazelnut shells, the work, probably, of a mouse or a squirrel; but this

caterpillar was dead and apparently partly eaten. So I am still inclined to think that most of them are washed out of the meadows by the freshets. Several times before I have seen nests half filled with nutshells, and as the *Mus leucopus* adds to and after occupies old nests, am inclined to think that he does it. It may be a convenient deposit for him (or for a striped squirrel??), or else he likes it for concealment and protection against hawks, — in the midst of a thorn bush, before the leaves fall. I do not know, however, that the mouse has this habit of perching while it nibbles, as the squirrel has.

Again I am struck by the singularly wholesome colors of the withered oak leaves, especially the shrub oak, so thick and firm and unworn, without speck or fret, clear reddish-brown (sometimes paler or yellowish brown), its whitish under sides contrasting with it in a very cheerful manner. So strong and cheerful, as if it rejoiced at the advent of winter, and exclaimed, "Winter, come on!" It exhibits the fashionable colors of the winter on the two sides of its leaves. It sets the fashions, colors good for bare ground or for snow, grateful to the eyes of rabbits and partridges. This is the extent of its gaudiness, red brown and misty white, and yet it is gay. The colors of the brightest flowers are not more agreeable to my eye. Then there is the now rich, dark brown of the black oak's large and somewhat curled leaf on sprouts, with its lighter, almost yellowish, brown under side. Then the salmonish hue of white oak leaves, with the under sides less distinctly lighter. Many, however, have quite faded already.

Going through a partly frozen meadow near the meadow [*sic*], scraping through the sweet-gale, I am pleasantly scented with its odoriferous fruit.

A week or so ago, as I learn, Miss Emeline Barnett told a little boy who boards with her, and who was playing with an open knife in his hand, that he must be careful not to fall down and cut himself with it, for once Mr. David Loring, when he was a little boy, fell down with a knife in his hand and cut his throat badly. It was soon reported, among the children at least, that little David Loring, the grandson of the former, had fallen down with a knife in his hand as he was going to school, and nearly cut his throat; next, that Mr. David Loring the grandfather (who lives in Framingham) had committed suicide, had cut his throat, was not dead, indeed, but was not expected to live; and in this form the story spread like wildfire over the town and county. Nobody expressed surprise. His oldest acquaintances and best friends, his legal adviser, all said, "Well, I can believe it." He was known by many to have been speculating in Western lands, which, owing to the hard times, was a failure, and he was depressed in consequence. Sally Cummings helped spread the news. Said there was no doubt of it, but there was Fay's wife (L.'s daughter) knew nothing of it yet, they were as merry as crickets over there. Others stated that Wetherbee, the expressman, had been over to Northboro, and learned that Mr. Loring had taken poison in Northboro. Mr. Rhodes was stated to have received a letter from Mr. Robbins of Framingham giving all the particulars. Mr. Wild, it

was said, had also got a letter from his son Silas in Framingham, to whom he had written, which confirmed the report. As Wild went down-town, he met Meeks the carpenter and inquired in a significant way if he got anything new. Meeks simply answered, "Well, David Loring won't eat another Thanksgiving dinner." A child at school wrote to her parents at Northboro, telling the news. Mrs. Loring's sister lives there, and it chances that her husband committed suicide. They were, therefore, slow to communicate the news to her, but at length could not contain themselves longer and told it. The sister was terribly affected; wrote to her son (L.'s nephew) in Worcester, who immediately took the cars and went to Framingham and when he arrived there met his uncle just putting his family into the cars. He shook his hand very heartily indeed, looking, however, hard at his throat, but said not a word about his errand. Already doubts had arisen, people were careful how they spoke of it, the expressmen were mum, Adams and Wetherbee never said Loring. The Framingham expressman used the same room with Adams in Boston. A. simply asked, "Any news from Framingham this morning? Seen Loring lately?" and learned that all was well.

Nov. 30. A still, warm, cloudy, rain-threatening day.

Surveying the J. Richardson lot.

The air is full of geese. I saw five flocks within an hour, about 10 A. M., containing from thirty to fifty each, and afterward two more flocks, making in all

from two hundred and fifty to three hundred at least, all flying southwest over Goose and Walden Ponds. The former was apparently well named Goose Pond. You first hear a faint honking from one or two in the northeast and think there are but few wandering there, but, looking up, see forty or fifty coming on in a more or less broken harrow, wedging their way southwest. I suspect they honk more, at any rate they are more broken and alarmed, when passing over a village, and are seen falling into their ranks again, assuming the perfect harrow form. Hearing only one or two honking, even for the seventh time, you think there are but few till you see them. According to my calculation a thousand or fifteen hundred may have gone over Concord to-day. When they fly low and near, they look very black against the sky.[1]

Northwest of Little Goose Pond, on the edge of Mrs. Bigelow's wood-lot, are several hornbeams (*Carpinus*). Looking into a cleft in one of them about three feet from the ground, which I thought might be the scar of a blazing, I found some broken kernels of corn, probably placed there by a crow or jay. This was about half a mile from a corn-field.

[1] I hear that one was killed by Lee in the Corner about this time.

V

DECEMBER, 1857

(ÆT. 40)

Dec. 1. P. M. — Walking in Ebby Hubbard's woods, I hear a red squirrel barking at me amid the pine and oak tops, and now I see him coursing from tree to tree. How securely he travels there, fifty feet from the ground, leaping from the slender, bending twig of one tree across an interval of three or four feet and catching at the nearest twig of the next, which so bends under him that it is at first hard to get up it. His travelling a succession of leaps in the air at that height without wings! And yet he gets along about as rapidly as on the ground.

I hear the faintest possible quivet from a nuthatch, quite near me on a pine. I thus always begin to hear this bird on the approach of winter,[1] as if it did not breed here, but wintered here.

I hear of two more flocks of geese going over to-day.

Dec. 2. Measuring Little Goose Pond, I observed two painted tortoises moving about under the thin transparent ice. When I broke it with my fist over each in succession, it was stunned by the blow. I put them back through the hole; else they might have frozen outside. There was a brown leech spread broad

[1] Hear it all the fall (and occasionally through the summer of '59).

and flat and roundish on the sternum of one, nearly an inch and a half across, apparently going to winter with it.

Where are the respectabilities of sixty years ago, the village aristocracy, the Duncan Ingrahams who lived in the high house? An Englishman lived in the Vose house. How poor and short-lived a distinction to strive after!

I find that, according to the deed of Duncan Ingraham to John Richardson in 1797, my old bean-field on Walden Pond then belonged to George Minott. (Minott thinks he bought it of an Allen.) This was Deacon George Minott, who lived in the house next below the East Quarter schoolhouse, and was a brother of my grandfather-in-law. He was directly descended from Thomas Minott, who, according to Shattuck, was secretary of the Abbot of Walden (!) in Essex, and whose son George was born at Saffron Walden (!) and afterwards was one of the early settlers of Dorchester.

Roads were once described as leading to a meeting-house, but not so often nowadays.

Dec. 3. *Thursday.* Surveying the Richardson lot, which bounds on Walden Pond, I turned up a rock near the pond to make a bound with, and found under it, attached to it, a collection of black ants (say a quarter of an inch long) an inch in diameter, collected around one monster black ant as big as four or five at least, and a small parcel of yellowish eggs (?). The large ant had no wings and was probably their queen. The ants were quite lively, though but little way under the

edge of the rock. The eggs (?) adhered to the rock when turned up.

Dec. 4. Surveying the Richardson Fair Haven lot. Rufus Morse, who comes to find his bounds on R., accounts for his deed being tattered by saying that some tame flying squirrels got loose and into a chest where he kept his papers and nibbled them, though the lid was not raised enough to get in a cent! They are so flat. I survey to a white oak called in '91 "a small white oak."

Dec. 5. At noon a few flakes fall.

Dec. 6. *Sunday.* Flannery tells me he is cutting in Holbrook's Swamp, in the Great Meadows, a lonely place. He sees a fox repeatedly there, and also a white weasel, — once with a mouse in its mouth, in the swamp.

Dec. 7. Running the long northwest side of Richardson's Fair Haven lot.

It is a fair, sunny, and warm day in the woods for the season. We eat our dinners on the middle of the line, amid the young oaks in a sheltered and very unfrequented place. I cut some leafy shrub oaks and cast them down for a dry and springy seat. As I sit there amid the sweet-fern, talking with my man Briney, I observe that the recent shoots of the sweet-fern — which, like many larger bushes and trees, have a few leaves in a tuft still at their extremities — toward the sun are densely covered with a bright, warm, silvery down,

which looks like frost, so thick and white. Looking the other way, I see none of it, but the bare reddish twigs. Even this is a cheering and compensating discovery in my otherwise barren work. I get thus a few positive values, answering to the bread and cheese which make my dinner. I owe thus to my weeks at surveying a few such slight but positive discoveries.

Briney, who has been in this country but few years, says he has lost three children here. His eldest boy fell on the deck in rough weather and struck his knee on the anchor-chain, and though he did not mind it then, his whole body ran out of the wound within two or three months.

I would rather sit at this table with the sweet-fern twigs between me and the sun than at the king's.

Dec. 8. Staples says he came to Concord some twenty-four years ago a poor boy with a dollar and three cents in his pocket, and he spent the three cents for drink at Bigelow's tavern, and now he's worth "twenty hundred dollars clear." He remembers many who inherited wealth whom he can buy out to-day. I told him that he had done better than I in a pecuniary respect, for I had only earned my living. "Well," said he, "that's all I've done, and I don't know as I've got much better clothes than you." I was particularly poorly clad then, in the woods; my hat, pants, boots, rubbers, and gloves would not have brought fourpence, and I told the Irishman that it was n't everybody could afford to have a fringe round his legs, as I had, my corduroys not preserving a selvage.

1857

Staples said there was one thing he liked. "What is that?" "An honest man." If he lent a man money, and when it became due he came and asked for more time because he could not pay, he excused him, but if, after it had become due, he went to the man, and he then made the same excuse, he lost all confidence in him.

Dec. 13. P. M. — To Goose Pond.

This and the like ponds are just covered with virgin ice just thick enough to bear, though it cracks about the edges on the sunny sides. You may call it virgin ice as long as it is transparent. I see the water-target leaves frozen in under the ice in Little Goose Pond. I see those same two tortoises (of Dec. 2d), moving about in the same place under the ice, which I cannot crack with my feet. The Emerson children see six under the ice of Goose Pond to-day. Apparently many winter in the mud of these ponds and pond-holes.

In sickness and barrenness it is encouraging to believe that our life is dammed and is coming to a head, so that there seems to be no loss, for what is lost in time is gained in power. All at once, unaccountably, as we are walking in the woods or sitting in our chamber, after a worthless fortnight, we cease to feel mean and barren.

I go this afternoon thinking I may find the stakes set for auction lots on the Ministerial Lot in December, '51. I find one white birch standing and two fallen. The latter were faced at one end, for the numbers, and at the other *rotten* and broken off as short, appar-

ently, as if sawed, because the bark so tears. At first I did not know but they had been moved, but thinking that if they had fallen where they stood I should find some hole or looseness in the ground at the rotten end, I felt for it and in each case found it; in one, also, the rotten point of the stake. Thus in six years two out of three stout (two-and-a-half-inch) birch stakes were flat. The hickory stake I set on R. W. E.'s town line in March, '50, was flat this last summer, or seven years, but a white [*sic*] stake set in '49–'50 on Moore and Hosmer's lot was standing aslant this month. A surveyor should know what stakes last longest.

I hear a characteristic anecdote respecting Mrs. Hoar, from good authority. Her son Edward, who takes his father's place and attends to the same duties, asked his mother the other night, when about retiring, "Shall I put the cat down cellar?" "No," said she, "you may put her outdoors." The next night he asked, "Shall I put the cat outdoors?" "No," answered she, "you may put her down cellar." The third night he asked, "Shall I put the cat down cellar or outdoors?" "Well," said his mother, "you may open the cellar door and then open the front door, and let her go just which way she pleases." Edward suggested that it was a cold night for the cat to be outdoors, but his mother said, "Who knows but she has a little kitten somewhere to look after?" Mrs. H. is a peculiar woman, who has her own opinion and way, a strong-willed, managing woman.

Dec. 15. Within a day or two, I saw another partridge in the snare of November 28th, frozen stiff.

To-day I see that some creature has torn and disembowelled it, removing it half a rod, leaving the head in snare, which has lifted it three or four feet in the air on account of its lightness. This last bird was either a female or young male, its ruff and bar on tail being rather dark-brown than black.

Dec. 16. Begins to snow about 8 A. M., and in fifteen minutes the ground is white, but it soon stops. Plowed grounds show white first.

Dec. 20. A. M. — To Easterbrooks Country with Ricketson.

A hen-hawk circling over that wild region. See its red tail.

The cellar stairs at the old Hunt house are made of square oak timbers; also the stairs to the chamber of the back part of apparently square maple (?) timber, much worn. The generous cellar stairs!

Dec. 21. Walking over the Andromeda Ponds between Walden and Fair Haven, which have only frozen just enough to bear me, I see in springy parts, where the ice is thin, good-sized pollywogs wiggling away, scared by the sound of my steps and cracking of the ice. They appear to keep in motion in such muddy pond-holes, where a spring wells up from the bottom till midwinter, if not all winter.

Dec. 25. Surveying for heirs of J. Richardson, G. Heywood and A. Brooks accompanying.

Skate on Goose Pond. Heywood says that some who have gone into Ebby Hubbard's barn to find him have seen the rats run over his shoulders, they are so familiar with him. This because I stopped to speak with Hubbard in his barn about bounds. I find the true line between Richardson and Mrs. Bigelow, which Captain Hubbard overlooked in 1840, and yet I find it by his own plan of 1827. Bigelow had set a split stone far into Richardson. After making the proper allowance for variation since 1827, I set my stake exactly on an old spotted line, which was overlooked in 1840 and is probably as old as the survey of '27, or thirty years. It is on good-sized white pines, and is quite distinct now, though not blazed into the wood at first. It would not be detected unless you were looking for it.

Dec. 26. Snows all day, — first snow of any consequence, three or four inches in all.

Humphrey Buttrick tells me that he has shot little dippers. He also saw the bird which Melvin shot last summer (a coot), but he never saw one of them before. The little dipper must, therefore, be different from a coot. Is it not a grebe?

Dec. 27. Sunday. A clear, pleasant day.

P. M. — To Goose Pond.

Tree sparrows about the weeds in the yard. A snowball on every pine plume, for there has been no wind to shake it down. The pitch pines look like trees heavily laden with snow oranges. The snowballs on their plumes are like a white fruit. When I thought-

lessly strike at a limb with my hatchet, in my surveying, down comes a sudden shower of snow, whitening my coat and getting into my neck. You must be careful how you approach and jar the trees thus supporting a light snow.

Partridges dash away through the pines, jarring down the snow.

Mice have been abroad in the night. We are almost ready to believe that they have been shut up in the earth all the rest of the year because we have not seen their tracks. I see where, by the shore of Goose Pond, one has pushed up just far enough to open a window through the snow three quarters of an inch across, but has not been forth. Elsewhere, when on the pond,

I see in several places where one has made a circuit out on to the pond a rod or more, returning to the shore again. Such a track may, by what we call accident, be preserved for a geological period, or be obliterated by the melting of the snow.

Goose Pond is not thickly frozen yet. Near the north shore it cracks under the snow as I walk, and in many places water has oozed out and spread over the ice, mixing with the snow and making dark places. Walden is almost entirely skimmed over. It will probably be completely frozen over to-night.[1]

I frequently hear a dog bark at some distance in the night, which, strange as it may seem, reminds me of the cooing or *crowing* of a ring dove which I heard every night a year ago at Perth Amboy. It was sure

[1] Yes.

to coo on the slightest noise in the house; as good as a watch-dog. The crowing of cocks, too, reminds me of it, and, now I think of it, it was precisely the intonation and accent of the cat owl's *hoo' hoo-hoo-oo*, dwelling in each case sonorously on the last syllable. They get the pitch and break ground with the first note, and then prolong and swell it in the last. The commonest and cheapest sounds, as the barking of a dog, produce the same effect on fresh and healthy ears that the rarest music does. It depends on your appetite for sound. Just as a crust is sweeter to a healthy appetite than confectionery to a pampered or diseased one. It is better that these cheap sounds be music to us than that we have the rarest ears for music in any other sense. I have lain awake at night many a time to think of the barking of a dog which I had heard long before, bathing my being again in those waves of sound, as a frequenter of the opera might lie awake remembering the music he had heard.

As my mother made my pockets once of Father's old fire-bags, with the date of the formation of the Fire Society on them, — 1794, — though they made but rotten pockets, — so we put our meaning into those old mythologies. I am sure that the Greeks were commonly innocent of any such *double-entendre* as we attribute to them.

One while we do not wonder that so many commit suicide, life is so barren and worthless; we only live on by an effort of the will. Suddenly our condition is ameliorated, and even the barking of a dog is a pleasure to us. So closely is our happiness bound up with our physical condition, and one reacts on the other.

Do not despair of life. You have no doubt force enough to overcome your obstacles. Think of the fox prowling through wood and field in a winter night for something to satisfy his hunger. Notwithstanding cold and the hounds and traps, his race survives. I do not believe any of them ever committed suicide. I saw this afternoon where probably a fox had rolled some small carcass in the snow.

I cut a blueberry bush this afternoon, a venerable-looking one bending over Goose Pond, with a gray, flat, scaly bark, the bark split into long, narrow, closely adhering scales, the inner bark dull-reddish. At several feet from the ground it was one and five sixteenths inches in diameter, and I counted about twenty-nine indistinct rings. It seems a very close-grained wood. It appears, then, that some of those old gray blueberry bushes which overhang the pond-holes have attained half the age of man.

I am disappointed by most essays and lectures. I find that I had expected the authors would have some life, some very private experience, to report, which would make it comparatively unimportant in what style they expressed themselves, but commonly they have only a talent to exhibit. The new magazine which all have been expecting may contain only another love story as naturally told as the last, perchance, but without the slightest novelty in it. It may be a mere vehicle for Yankee phrases.

What interesting contrasts our climate affords! In July you rush panting into [a] pond, to cool yourself in the tepid water, when the stones on the bank are

so heated that you cannot hold one tightly in your hand, and horses are melting on the road. Now you walk on the same pond frozen, amid the snow, with numbed fingers and feet, and see the water-target bleached and stiff in the ice.

Dec. 31. P. M. — Surveying Goose Pond.

After some rain yesterday and in the night, there was a little more snow, and the ground is still covered. I am surprised to find Walden still closed since Sunday night, notwithstanding the warm weather since it skimmed over, and that Goose Pond bears, though covered with slosh; but ice under water is slow to thaw. It does not break up so soon as you would expect. Walking over it, I thought that I saw an old glove on the ice or slosh, but, approaching, found it to be a bullfrog, flat on its belly with its legs stretched out. Touching it, I found it to be alive, though it could only partially open its eyes, and it hung motionless and flimsy like a rag in my hands. It was evidently nearly chilled to death and could not jump, though there was then no freezing. I looked round a good while and finally found a hole to put it into, squeezing it through. Perhaps in such a warm rain the surface water becomes warmer than at the bottom, and so tempts the frogs up on to the ice through a hole. This one was wholly unscathed by any animal, but would surely have frozen stiff in the night.

It is remarkable that in ordinary winter weather you will commonly find some of these small holes called air or breathing holes, in most ponds. But of whatever

service they may be to the inhabitants of the water, they are not commonly formed by any undulation or upwelling from below, but as far as I have observed, by surface water flowing in through a crevice and wearing away the ice.

Warm as it is, underneath all this slosh the ice seems as solid as ever.

Under and attached to one of the lowermost branches of a white pine sapling in my old potato-field, I see a large hornet's nest, *close to the ground.*

I have been surveying most of the time for a month past and have associated with various characters: —

First there was Staples, quick, clear, downright, and on the whole a good fellow, especially good to treat with rougher and slower men than himself, always meaning well.

An Irishman, rather slow and dull but well-meaning.

A rustic innkeeper, evidently rather close-fisted.

George Heywood, a quiet, efficient man, very gentlemanly and agreeable to deal with; no pretense nor bluster, but simple, direct, and even sweet.

—— ——, a crooked stick, not readily apprehending your drift, referring to old deeds or places which he can't find, thinking he is entitled to many more acres than belong to him, but never leaving his work or his cattle to attend to you. To be found commonly in his barn, if you come upon him suddenly before he can hide. Has some complaint or injury which deforms him somewhat, — has crooked his body, so that when you meet him in the street he looks as if he was going across the road.

Another Irishman, one of the worst of his race, full of blarney, one of the would-be gentlemen, who, when treated according to his deserts, having complained unreasonably of my price, apologizes by saying that he meant nothing. "What's the use of having a tongue in your head if you don't use it?"

A common specimen of the Yankee, who commonly answers me with "exactly" or "just so."

—— ——, who was so afraid he should lose some land belonging to him that, though he had employed Rice to survey his small wood-lot of three acres, within a year, he working two or three days at it and setting at least fifty stakes about it, having also two plans of it, yet, seeing that I had by chance set a stake a foot or two one side of his line, thought there was some mistake and would have me measure his lot anew. It was but little labor, the lines were so open, — for a path was actually worn round the whole lot. He appears to go round it every day or two. When I wanted a straight pole, he was very scrupulous not to cut it from his neighbor's side of the line. He did not seem able to understand a plan or deed, and had sold some of his land because he did not know that he had a good title to it. Everything I told him about his deed and plan seemed to surprise him infinitely and make him laugh with excess of interest. When I pointed out anything in the plan, he did not look at it, only at my finger and at me, and took my word for it. I told him that I wondered his last surveyor had not set a stake and stone in one place, according to his plan and deed, a perfectly plain case, the stump of the pitch pine re-

ferred to being left. He said he did n't want to make bounds, and asked me if I should have set it there, to which I answered, "Yes, of course," that was what I had been doing all my life, making bounds, or rather finding them, remaking what had been unmade, where they were away. He listened to me as if I were an oracle. He did not in the least understand my instrument, or "spy-glass," as he called it, but had full faith that it knew the way straight through the thickest wood to missing bounds. He was so deaf I had to shout to him, and there were two more in his house deafer than he, — and I think only one other. The passers-by commonly hear them talking to one another within. I could never communicate with him when setting a stake or carrying the chain but by signs, and must first get his attention to the signs. This I accomplished, when he had hold of the chain, by giving it several smart jerks. When he paid me at his house, I observed that all his money was in silver. He said he told H—— that we had been cutting off some of his land, and H—— said, "Is that right?" H—— has a good deal of large old wood which he will not cut. —— says that he goes into it with his axe, and striking on an old tree says, "That's sound," and so lets it stand, though when cut it turns out to be false-hearted.

—— says that Rice worked two days on only two sides of his lot, but that he told him he would not charge him but two dollars if it took him a week. I found and used one of Rice's poles, left on the ground all planed for the purpose, for he worked not without tools.

VI

JANUARY, 1858

(ÆT. 40)

Jan. 1. There are many words which are genuine and indigenous and have their root in our natures, not made by scholars, and as well understood by the illiterate as others. There are also a great many words which are spurious and artificial, and can only be used in a bad sense, since the thing they signify is not fair and substantial, — such as the *church*, the *judiciary*, to *impeach*, etc., etc. They who use them do not stand on solid ground. It is in vain to try to preserve them by attaching other words to them as the *true* church, etc. It is like towing a sinking ship with a canoe.

I have lately been surveying the Walden woods so extensively and minutely that I now see it mapped in my mind's eye — as, indeed, on paper — as so many men's wood-lots, and am aware when I walk there that I am at a given moment passing from such a one's wood-lot to such another's. I fear this particular dry knowledge may affect my imagination and fancy, that it will not be easy to see so much wildness and native vigor there as formerly. No thicket will seem so unexplored now that I know that a stake and stones may be found in it. In these respects those Maine woods differed essentially from ours. There you are never

reminded that the wilderness which you are threading is, after all, some villager's familiar wood-lot from which his ancestors have sledded their fuel for generations, or some widow's thirds, minutely described in some old deed, which is recorded, of which the owner has got a plan, too, and old bound marks may be found every forty rods if you will search.[1] What a history this Concord wilderness which I affect so much may have had! How many old deeds describe it, — some particular wild spot, — how it passed from Cole to Robinson, and Robinson to Jones, and Jones finally to Smith, in course of years! Some have cut it over three times during their lives, and some burned it and sowed it with rye, and built walls and made a pasture of it, perchance. All have renewed the bounds and reblazed the trees many times. Here you are not reminded of these things. 'T is true the map informs you that you stand on land granted by the State to such an academy, or on Bingham's Purchase, but these names do not impose on you, for you see nothing to remind you of the academy or of Bingham.[2]

Jan. 3. *Sunday.* I see a flock of *F. hyemalis* this afternoon, the weather is hitherto so warm.

About, in his lively "Greece and the Greeks," says, "These are the most exquisite delights to be found in Greece, next to, or perhaps before, the pleasure of admiring the masterpieces of art, — a little cool water under a genial sun." I have no doubt that this is true.

[1] [*Maine Woods*, p. 168; Riv. 206, 207.]

[2] [*Maine Woods*, pp. 168, 169; Riv. 207.]

Why, then, travel so far when the same pleasures may be found near home?

The slosh on Walden had so much water in it that it has now frozen perfectly smooth and looks like a semitransparent marble. Being, however, opaque, it reminds one the more of some vast hall or corridor's floor, yet probably not a human foot has trodden it yet. Only the track-repairers and stokers have cast stones and billets of wood on to it to prove it.

Going to the Andromeda Ponds, I was greeted by the warm brown-red glow of the *Andromeda calyculata* toward the sun. I see where I have been through, the more reddish under sides apparently being turned up. It is long since a human friend has met me with such a glow.

Jan. 4. P. M. — The weather still remarkably warm; the ice too soft for skating. I go through by the Andromeda Ponds and down river from Fair Haven. I am encouraged by the sight of men fishing in Fair Haven Pond, for it reminds me that they have animal spirits for such adventures. I am glad to be reminded that any go a-fishing. When I get down near to Cardinal Shore, the sun near setting, its light is wonderfully reflected from a narrow edging of yellowish stubble at the edge of the meadow ice and foot of the hill, an edging only two or three feet wide, and the stubble but a few inches high. (I am looking east.) It is remarkable because the ice is but a dull lead-color (it is so soft and sodden), reflecting no light, and the hill beyond is a dark russet, here and there patched with snow,

but this narrow intermediate line of stubble is all aglow. I get its true color and brightness best when I do not look directly at it, but a little above it toward the hill, seeing it with the lower part of my eye more truly and abstractly. It is as if all the rays slid over the ice and lodged against and were reflected by the stubble. It is surprising how much sunny light a little straw that survives the winter will reflect.

The channel of the river is open part of the way. The *Cornus sericea* and some quite young willow shoots are the red-barked twigs so conspicuous now along the riversides.

That bright and warm reflection of sunlight from the insignificant edging of stubble was remarkable. I was coming down-stream over the meadows, on the ice, within four or five rods of the eastern shore. The sun on my left was about a quarter of an hour above the horizon. The ice was soft and sodden, of a dull lead-color, quite dark and reflecting no light as I looked eastward, but my eyes caught by accident a singular sunny brightness reflected from the narrow border of stubble only three or four inches high (and as many feet wide perhaps) which rose along the edge of the ice at the foot of the hill. It was not a mere brightening of the bleached stubble, but the warm and yellow light of the sun, which, it appeared, it was peculiarly fitted to reflect. It was that amber light from the west which we sometimes witness after a storm, concentrated on this stubble, for the hill beyond was merely a dark russet spotted with snow. All the yellow rays seemed to be reflected by this insignificant stubble

alone, and when I looked more generally a little above it, seeing it with the under part of my eye, it appeared yet more truly and more bright; the reflected light made its due impression on my eye, separated from the proper color of the stubble, and it glowed almost like a low, steady, and serene fire. It was precisely as if the sunlight had mechanically slid over the ice, and lodged against the stubble. It will be enough to say of something warmly and sunnily bright that it glowed like lit stubble. It was remarkable that, looking eastward, this was the only evidence of the light in the west.

Here and there in the meadow, etc., near springy places, you see where the thinner ice has been pushed up tentwise ( ) and cracked, either for want of room, two fields crowding together, or expanding with heat from below.

Jan. 5. P. M. — I see one of those fuzzy winter caterpillars, black at the two ends and brown-red in middle, crawling on a rock by the Hunt's Bridge causeway.

Mr. Hosmer is loading hay in his barn. It is meadow-hay, and I am interested in it chiefly as a botanist. If meadow-hay is of less worth in the market, it is more interesting to the poet. In this there is a large proportion of *Osmunda regalis*. But I fear that in the long run it is not so interesting to the cattle to contemplate and chew this as English hay and clover. How completely a load of hay in the winter revives the memory of past summers! Summer in us is only

a little dried like it. The rowen in Hosmer's barn has a finer and greener look than the first crop. And so the ferns in coal remind us of summer still longer past.

Jan. 6. The first snow-storm of much importance. By noon it *may be* six inches deep.

P. M. — Up railroad to North River.

The main stream, barely skimmed over with snow, which has sunk the thin ice and is saturated with water, is of a dull-brown color between the white fields.

I detect a very tall and slender tupelo by its thorny-looking twigs. It is close by a white oak, at the yellow gerardia up railroad. It is nearly fifty feet high and only one foot through at the ground. I derive a certain excitement, not to be refused, even from going through Dennis's Swamp on the opposite side of the railroad, where the poison-dogwood abounds. This simple-stemmed bush is very full of fruit, hanging in loose, dry, pale-green drooping panicles. Some of them are a foot long. It impresses me as the most fruitful shrub thereabouts. I cannot refrain from plucking it and bringing home some pretty sprigs. Other fruits there are there which belong to the hard season, the enduring panicled andromeda and a few partly decayed prinos berries. I walk amid the bare midribs of cinnamon ferns, with at most a terminal leafet, and here and there I see a little dark water at the bottom of a dimple in the snow, over which the snow has not yet been able to prevail.

I was feeling very cheap, nevertheless, reduced to

make the most of dry dogwood berries. Very little evidence of God or man did I see just then, and life not as rich and inviting an enterprise as it should be, when my attention was caught by a snowflake on my coat-sleeve. It was one of those perfect, crystalline, star-shaped ones, six-rayed, like a flat wheel with six spokes, only the spokes were perfect little pine trees in shape, arranged around a central spangle. This little object, which, with many of its fellows, rested unmelting on my coat, so perfect and beautiful, reminded me that Nature had not lost her pristine vigor yet, and why should man lose heart? Sometimes the pines were worn and had lost their branches, and again it appeared as if several stars had impinged on one another at various angles, making a somewhat spherical mass. These little wheels came down like the wrecks of chariots from a battle waged in the sky. There were mingled with these starry flakes small downy pellets also. This was at mid-afternoon, and it has not quite ceased snowing yet (at 10 P. M.). We are rained and snowed on with gems. I confess that I was a little encouraged, for I was beginning to believe that Nature was poor and mean, and I was now convinced that she turned off as good work as ever. What a world we live in! Where are the jewellers' shops? There is nothing handsomer than a snowflake and a dewdrop. I may say that the maker of the world exhausts his skill with each snowflake and dewdrop that he sends down. We think that the one mechanically coheres and that the other simply flows together and falls, but in truth they are the product of *enthu-*

siasm, the children of an ecstasy, finished with the artist's utmost skill.[1]

The North River is not frozen over. I see tree sparrows twittering and moving with a low creeping and jerking motion amid the chenopodium in a field, upon the snow, so chubby or puffed out on account of the cold that at first I took them for the arctic birds, but soon I see their bright-chestnut crowns and clear white bars; as the poet says, "a thousand feeding like one," [2] — though there are not more than a dozen here.

Jan. 7. The storm is over, and it is one of those beautiful winter mornings when a vapor is seen hanging in the air between the village and the woods. Though the snow is only some six inches deep, the yards appear full of those beautiful crystals (star or wheel shaped flakes), lying light, as a measure is full of grain.

9 A. M. — To Hill.

It snowed so late last night, and so much has fallen from the trees, that I notice only one squirrel, and a fox, and perhaps partridge track, into which the snow has blown. The fox has been beating the bush along walls and fences. The surface of the snow in the woods is thickly marked by the snow which has fallen from the trees on to it. The mice have not been forth since the snow, or perhaps in some places where they have, their tracks are obliterated.

By 10.30 A. M. it begins to blow hard, the snow comes down from the trees in fine showers, finer far than ever

[1] [Channing, pp. 72, 73.]

[2] ["There are forty feeding like one." — WORDSWORTH.]

falls direct from the sky, completely obscuring the view through the aisles of the wood, and in open fields it is rapidly drifting. It is too light to make good sleighing.

By 10 o'clock I notice a very long level stratum of cloud not very high in the southeastern sky, — all the rest being clear, — which I suspect to be the vapor from the sea. This lasts for several hours.

These are true mornings of creation, original and poetic days, not mere repetitions of the past. There is no lingering of yesterday's fogs, only such a mist as might have adorned the first morning.

P. M. — I see some tree sparrows feeding on the fine grass seed above the snow, near the road on the hillside below the Dutch house. They are flitting along one at a time, their feet commonly sunk in the snow, uttering occasionally a low sweet warble and seemingly as happy there, and with this wintry prospect before them for the night and several months to come, as any man by his fireside. One occasionally hops or flies toward another, and the latter suddenly jerks away from him. They are reaching or hopping up to the fine grass, or oftener picking the seeds from the snow. At length the whole ten have collected within a space a dozen feet square, but soon after, being alarmed, they utter a different and less musical chirp and flit away into an apple tree.

Jan. 8. P. M. — To that small meadow just above the Boaz Brown meadow.

Going through the swamp, the snow balled so as to raise me three inches higher than usual.

Jan. 9. Snows again.

P. M. — To Deep Cut.

The wind is southwest, and the snow is very moist, with large flakes. Looking toward Trillium Wood, the nearer flakes appear to move quite swiftly, often making the impression of a continuous white line. They are also seen to move directly and nearly horizontally, but the more distant flakes appear to loiter in the air, as if uncertain how they will approach the earth, or even to cross the course of the former, and are always seen as simple and distinct flakes. I think that this difference is simply owing to the fact that the former pass quickly over the field of view, while the latter are much longer in it.

This moist snow has affected the yellow sulphur parmelias and others. They have all got a green hue, and the fruit of the smallest lichen looks fresh and fair. And the wet willow bark is a brighter yellow.

Some chickadees come flitting close to me, and one utters its spring note, *phe-be*, for which I feel under obligations to him.

Jan. 10. *Sunday.* P. M. — To Goose Pond across Walden.

The north side of Walden is a warm walk in sunny weather. If you are sick and despairing, go forth in winter and see the red alder catkins dangling at the extremities of the twigs, all in the wintry air, like long,

hard mulberries, promising a new spring and the fulfillment of all our hopes. We prize any tenderness, any softening, in the winter, — catkins, birds' nests, insect life, etc., etc. The most I get, perchance, is the sight of a mulberry-like red catkin which I know has a dormant life in it, seemingly greater than my own.

Jan. 11. *Monday. Rain, rain* — washes off almost every vestige of snow.

Jan. 13. *Wednesday.* Go to Lynn to lecture, *via* Cambridge.

4.30 P. M. — At Jonathan Buffum's, Lynn. Lecture in John B. Alley's parlor. Mr. J. Buffum describes to me ancient wolf-traps, made probably by the early settlers in Lynn, perhaps after an Indian model; one some two miles from the shore near Saugus, another more northerly; holes say seven feet deep, about as long, and some three feet wide, stoned up very smoothly, and perhaps converging a little, so that the wolf could not get out. Tradition says that a wolf and a squaw were one morning found in the same hole, staring at each other.

Jan. 14. Mr. Buffum says that in 1817 or 1819 he saw the sea-serpent at Swampscott, and so did several hundred others. He was to be seen off and on for some time. There were many people on the beach the first time, in carriages partly in the water, and the serpent came so near that they, thinking that he might come ashore, involuntarily turned their horses to the shore

as with a general consent, and this movement caused him to shear off also. The road from Boston was lined with people directly, coming to see the monster. Prince came with his spy-glass, saw, and printed his account of him. Buffum says he has seen him twenty times, once alone, from the rocks at Little Nahant, when he passed along close to the shore just beneath the surface, and within fifty or sixty feet of him, so that he could have touched him with a very long pole, if he had dared to. Buffum is about sixty, and it should be said, as affecting the value of his evidence, that he is a firm believer in Spiritualism.

This forenoon I rode to Nahant with Mr. Buffum. All the country bare. A fine warm day; neither snow nor ice, unless you search narrowly for them. On the way we pass Mr. Alonzo Lewis's cottage. On the top of each of his stone posts is fastened a very perfectly egg-shaped pebble of sienite from Kettle Cove, fifteen to eighteen inches long and of proportionate diameter. I never saw any of that size so perfect. There are some fifteen of them about his house, and on one flatter, circular one he has made a dial, by which I learned the hour (9.30 A. M.). Says he was surveying once at Kettle Cove, where they form a beach a third of a mile long and two to ten feet deep, and he brought home as many as his horse could draw. His house is clapboarded with hemlock bark; now some twenty years old. He says that he built it himself.

Called at the shop where lately Samuel Jillson, now of Feltonville, set up birds, — for he is a taxidermist and very skillful; kills his own birds and with blow-

guns, which he makes and sells, some seven feet long, of glass, using a clay ball. Is said to be a dead shot at six rods!

Warm and fall-like as it is, saw many snow buntings at the entrance to the beach. Saw many black ducks (so Lewis said; may they not have been velvet ducks, *i. e.* coot?) on the sea. Heard of a flock of geese (!) (may they not have been brant, or some other species?), etc.; ice [?] divers. On the south side of Little Nahant a large mass of *fine* pudding-stone. Nahant is said to have been well-wooded, and furnished timber for the wharves of Boston, *i. e.* to build them. Now a few willows and balm-of-Gileads are the only trees, if you except two or three small cedars. They say others will not grow on account of wind. The rocks are porphyry, with dykes of dark greenstone in it, and, at the extremity of Nahant, argillaceous slate, very distinctly stratified, with fossil corallines in *it* (?), looking like shells. Egg Rock, it seems, has a fertile garden on the top.

P. M. — Rode with J. Buffum, Parker Pillsbury, and Mr. Mudge, a lawyer and geologist of Lynn, into the northwest part of Lynn, to the Danvers line. After a mile or two, we passed beyond the line of the porphyry into the sienite. The sienite is more rounded. Saw some furrows in sienite. On a ledge of sienite in the woods, the rocky woods near Danvers line, saw many boulders of sienite, part of the same flock of which Ship Rock (so called) in Danvers is one. One fifteen feet long, ten wide, and five or six deep rested on four somewhat rounded (at least water-worn) stones,

eighteen inches in diameter or more, so that you could crawl under it, on the top of a cliff, and projected about eight feet over it, — just as it was dropped by an iceberg. A fine broad-backed ledge of sienite just beyond, north or northwest, from which we saw Wachusett, Watatic, Monadnock, and the Peterboro Hills.

Also saw where one Boyse (if that is the spelling), a miller in old times, got out millstones in a primitive way, so said an old man who was chopping there. He pried or cracked off a piece of the crust of the ledge, lying horizontal, some sixteen or eighteen inches thick, then made a fire on it about its edges, and, pouring on water, cracked or softened it, so that he could break off the edges and make it round with his sledge. Then he picked a hole through the middle and hammered it as smooth as he could, and it was done. But this old man said that he had heard old folks say that the stones were so rough in old times that they made a noise like thunder as they revolved, and much grit was mixed with the meal.

Returning down a gully, I thought I would look for a new plant and found at once what I suppose to be *Genista tinctoria*, dyers'-green-weed, — the stem is quite green, with a few pods and leaves left. It is said to have become naturalized on the hills of Essex County. Close by was a mass of sienite some seven or eight feet high, with a cedar some two inches thick springing from a mere crack in its top.

Visited Jordan's or the Lynn Quarry (of sienite) on our return, more southerly. The stone cracks very squarely and into very large masses. In one place was

a dyke of dark greenstone, of which, joined to the sienite, I brought off two specimens, *q. v.* The more yellowish and rotten surface stone, lying above the hard and grayer, is called the sap by the quarrymen.

From these rocks and wooded hills three or four miles inland in the northwest edge of Lynn, we had an extensive view of the ocean from Cape Ann to Scituate, and realized how the aborigines, when hunting, berrying, might perchance have looked out thus on the early navigators sailing along the coast, — thousands of them, — when they little suspected it, — how patent to the inhabitants their visit must have been. A vessel could hardly have passed within half a dozen miles of the shore, even, — at one place only, in pleasant weather, — without being seen by hundreds of savages.

Mudge gave me Saugus jasper, graywacke, amygdaloid (greenstone with nodules of feldspar), asbestos, hornstone (?); Buffum some porphyry, epidote, argillaceous slate from end of Nahant.

Mr. Buffum tells me that they never eat the sea-clams without first taking out "the worm," as it is called, about as large as the small end of a pipe-stem. He supposes it is the penis.

Jan. 15. At Natural History Rooms, Boston.

Looked at the little grebe. Its feet are not webbed with lobes on the side like the coot, and it is quite white beneath. Saw the good-sized duck — velvet duck, with white spot on wing — which is commonly called "coot" on salt water. They have a living young bald eagle in the cellar. Talked with Dr. Kneeland. They

have a golden eagle from Lexington, which K. obtained two or three years since, the first Dr. Cabot has heard of in Massachusetts. Speaking to him of my night-warbler, he asked if it uttered such a note, making the note of the myrtle-bird, *ah, te-te-te te-te-te te-te-te*, exactly, and said that that was the note of the white-throated sparrow, which he heard at Lake Superior, at night as well as by day.[1] *Vide* his report, July 15, 1857.

Same afternoon, saw Dr. Durkee in Howard Street. He has not seen the common glow-worm, and called his a variety of *Lampyris noctiluca*. Showed to Agassiz, Gould, and Jackson, and it was new to them. They thought it a variety of the above. His were luminous throughout, mine only in part of each segment.

Saw some beautiful painted leaves in a shop window, — maple and oak.

Jan. 17. *Sunday.* P. M. — To Conantum.

The common birch fungus, which is horizontal and turned downward, splits the bark as it pushes out very simply, thus:[2] I see a large downy owl's feather adhering to a sweet-fern twig, looking like the down of a plant blowing in the wind. This is near where I have found them before, on Conantum, above first Cliff. They would be very ornamental to a bonnet, so soft and fine with their reflections that the eye hardly rests on the down.

[1] [Concerning Thoreau's confusion as to the authorship of this song of the white-throated sparrow, see *Journal*, vol. v, p. 119.]

[2] *Vide* 26th.

Jan. 18. At the Dugan Desert, I notice, under the overhanging or nearly horizontal small white oaks and shrub oaks about the edge, singular little hollows in the sand, evidently made by drops of rain or melting snow falling from the same part of the twig, a foot or two, on the same spot a long time. They are very numerous under every such low horizontal bough, on an average about three quarters of an inch apart or more. They are a third of an inch wide and a quarter to even three quarters of an inch deep; made some days ago evidently.

The *F. hyemalis* about. I hear that the Emerson children found ladies'-delights out yesterday.

Jan. 19. *F. hyemalis.*

Jan. 23. *Saturday.* The wonderfully mild and pleasant weather continues. The ground has been bare since the 11th. This morning was colder than before. I have not been able to walk up the North Branch this winter, nor along the channel of the South Branch at any time.

P. M. — To Saw Mill Brook.

A fine afternoon. There has been but little use for gloves this winter, though I have been surveying a great deal for three months. The sun, and cockcrowing, bare ground, etc., etc., remind me of March.

Standing on the bridge over the Mill Brook on the Turnpike, there being but little ice on the south side, I see several small water-bugs (*Gyrinus*) swimming about, as in the spring.

I see the terminal shield fern very fresh, as an evergreen, at Saw Mill Brook, and (I think it is) the marginal fern and *Lycopodium lucidulum*.

I go up the brook, walking on it most of the way, surprised to find that it will bear me. How it falls from rock to rock, as down a flight of stairs, all through that rocky wood, from the swamp which is its source to the Everett farm! The bays or more stagnant parts are thickest frozen, the channel oftenest open, and here and there the water has overflowed the ice and covered it with a thickening mass of glistening spiculæ. The white markings on the under side are very rich and varied, — the currency of the brook, the impression of its fleeting bubbles even. It comes out of a meadow of about an acre.

I go near enough to Flint's Pond, about 4 P. M., to hear it thundering. In summer I should not have suspected its presence an eighth of a mile off through the woods, but in such a winter day as this it speaks and betrays itself.

Returning through Britton's field, I notice the stumps of chestnuts cut a dozen years ago. This tree grows rapidly, and one layer seems not to adhere very firmly to another. I can easily count the concentric circles of growth on these old stumps as I stand over them, for they are worn into conspicuous furrows along the lines of the pores of the wood. One or more rings often gape an eighth of an inch or more, at about their twenty-fourth or twenty-fifth year, when the growth, in three or four cases that I examined, was most rapid.

Looking toward the woods in the horizon, it is seen to be very hazy.

At Ditch Pond I hear what I suppose to be a fox barking, an exceedingly husky, hoarse, and ragged note, prolonged perhaps by the echo, like a feeble puppy, or even a child endeavoring to scream, but choked with fear, yet it is on a high key. It sounds so through the wood, while I am in the hollow, that I cannot tell from which side it comes. I hear it bark forty or fifty times at least. It is a peculiar sound, quite unlike any other woodland sound that I know.

Walden, I think, begins to crack and boom first on the south side, which is first in the shade, for I hear it cracking there, though it is still in the sun around me. It is not so sonorous and like the dumping of frogs as I have heard it, but more like the cracking of crockery. It suggests the very brittlest material, as if the globe you stood on were a hollow sphere of glass and might fall to pieces on the slightest touch. Most shivering, splintery, screeching cracks these are, as if the ice were no thicker than a tumbler, though it is probably nine or ten inches. Methinks my weight sinks it and helps to crack sometimes.

Who can doubt that men are by a certain fate what they are, contending with unseen and unimagined difficulties, or encouraged and aided by equally mysterious auspicious circumstances? Who can doubt this essential and innate difference between man and man, when he considers a whole race, like the Indian, inevitably and resignedly passing away in spite of our efforts to Christianize and educate them? Indi-

viduals accept their fate and live according to it, as the Indian does. Everybody notices that the Indian retains his habits wonderfully, — is still the same man that the discoverers found. The fact is, the history of the white man is a history of improvement, that of the red man a history of fixed habits of stagnation.

To insure health, a man's relation to Nature must come very near to a personal one; he must be conscious of a friendliness in her; when human friends fail or die, she must stand in the gap to him. I cannot conceive of any life which deserves the name, unless there is a certain tender relation to Nature. This it is which makes winter warm, and supplies society in the desert and wilderness. Unless Nature sympathizes with and speaks to us, as it were, the most fertile and blooming regions are barren and dreary.

Mrs. William Monroe told Sophia last evening that she remembered her (Sophia's) grandfather very well, that he was taller than Father, and used to ride out to their house — she was a Stone and lived where she and her husband did afterward, now Darius Merriam's — when they made cheeses, to drink the whey, being in consumption. She said that she remembered Grandmother too, Jennie Burns, how she came to the schoolroom (in Middle Street (?), Boston) once, leading her little daughter Elizabeth, the latter so small that she could not tell her name distinctly, but spoke thick and lispingly, — "Elizabeth Orrock Thoreau." [1]

The dog is to the fox as the white man to the red. The former has attained to more clearness in his bark;

[1] *Vide* Feb. 7th.

it is more ringing and musical, more developed; he explodes the vowels of his alphabet better; and beside he has made his place so good in the world that he can run without skulking in the open field. What a smothered, ragged, feeble, and unmusical sound is the bark of the fox! It seems as if he scarcely dared raise his voice lest it should catch the ear of his tame cousin and inveterate foe.

I observe that the ice of Walden is heaved up more than a foot over that bar between the pond and Cyrus Hubbard's basin. The gravelly bank or bar itself is also heaved up considerably where exposed. So that I am inclined to think that such a tilting is simply the result of a thawing beneath and not merely of a crowding or pressure on the two sides.

I do not see that I can live tolerably without affection for Nature. If I feel no softening toward the rocks, what do they signify?

I do not think much of that chemistry that can extract corn and potatoes out of a barren [soil], but rather of that chemistry that can extract thoughts and sentiments out of the life of a man on any soil. It is in vain to write on the seasons unless you have the seasons in you.

Jan. 24. *Sunday.* P. M. — Nut Meadow Brook.

The river is broadly open, as usual this winter. You can hardly say that we have had any sleighing at all this winter, though five or six inches of snow lay on the ground five days after January 6th. But I do not quite like this warm weather and bare ground at this

season. What is a winter without snow and ice in this latitude? The bare earth is unsightly. This winter is but unburied summer.

At that gully or ravine in the Clamshell bank, methinks the sides fall away faster in the winter; and such a winter as this, when the ground is bare, [faster] than ever. The subsoil and sand keeps freezing and thawing, and so bursts off, and the larger stones roll down on each side and are collected in a row at the bottom, so that there will be a sort of wall there of stones as big as a hen's egg propped up and finally covered with sand.

The inside of the swallow-holes there appears quite firm yet and regular, with marks where it was pecked or scratched by the bird, and the top is mottled or blotched, almost as if made firm in spots by the saliva of the bird. There is a low oven-like expansion at the end, and a good deal of stubble for the nest. I find in one an empty black cherry stone and the remains of a cricket or two. Probably a mouse left them there.

I see two of those black and red-brown fuzzy caterpillars in a mullein leaf on this bare edge-hill, which could not have blown from any tree, I think. They apparently take refuge in such places. One on the railroad causeway where it is high, in the open meadow.

I see a couple of broken small turtle eggs here which have been trodden out of the banks by cows going to drink in the river.

At Hosmer's tub spring a small frog is active!

At Nut Meadow Brook the small-sized water-bugs are as abundant and active as in summer. I see forty

or fifty circling together in the smooth and sunny bays all along the brook. This is something new to me. What must they think of this winter? It is like a child waked up and set to playing at midnight. Methinks they are more ready to dive to the bottom when disturbed than usual. At night, of course, they dive to the bottom and bury themselves, and if in the morning they perceive no curtain of ice drawn over their sky, and the pleasant weather continues, they gladly rise again and resume their gyrations in some sunny bay amid the alders and the stubble. I think that I never noticed them more numerous, but the fact is I never looked for them so particularly. But I fear for their nervous systems, lest this be too much activity, too much excitement. The sun falling thus warmly for so long on the open surface of the brook tempts them upward gradually, till there is a little group gyrating there as in summer. What a funny way they have of going to bed! They do not take a light and retire up-stairs; they go below. Suddenly it is heels up and heads down, and they go down to their muddy bed and let the unresting stream flow over them in their dreams. They go to bed in another element. What a deep slumber must be theirs, and what dreams, down in the mud there! So the insect life is not withdrawn far off, but a warm sun would soon entice it forth. Sometimes they seem to have a little difficulty in making the plunge. Maybe they are too dry to slip under. I saw one floating on its back, and it struggled a little while before it righted itself. Suppose you were to plot the course of one for a day; what kind of a figure would it

make? Probably this feat too will one day be performed by science, that maid of all work. I see one chasing a mote, and the wave the creature makes always causes the mote to float away from it. I would like to know what it is they communicate to one another, they who appear to value each other's society so much. How many water-bugs make a quorum? How many hundreds does their Fourier think it takes to make a complete bug? Where did they get their backs polished so? They will have occasion to remember this year, that winter when we were waked out of our annual sleep! What is their precise hour for retiring?

I see stretching from side to side of this smooth brook, where it is three or four feet wide, apparently an invisible waving line like a cobweb, against which the water is heaped up a very little. This line is constantly swayed to and fro, as by the current or wind bellying forward here and there. I try repeatedly to catch and break it with my hand and let the water run free, but still, to my surprise, I clutch nothing but fluid, and the imaginary line keeps its place. Is it the fluctuating edge of a lighter, perhaps more oily, fluid, overflowing a heavier? I see several such lines. It is somewhat like the slightest conceivable smooth fall over a dam. I must ask the water-bug that glides across it.

Ah, if I had no more sins to answer for than a water-bug! They are only the small water-bugs that I see. They are earlier in the spring and apparently hardier.

I walked about the long pond-hole beyond the wooded moraine. There are prinos bushes with much moss on them, such as grows on the button-bush around.

There is considerable rattlesnake grass there, which, with its drooping end above the ice, reminds me of wild rice meadows.

On every old oak stump the ends of the pores are the prominent part, while only the scale-like silver ray is left between their circles.

The sprouts of the canoe birch are not reddish like the white, but a yellowish brown. The small white begin to cast off their red cuticle the third or fourth year and reveal a whitish one.

The poison sumach, with its recurved panicles of pale-greenish fruit massed together in profusion at the base of last year's stout blunt twigs, is very interesting and handsome. It is one of the chief ornaments of the swamps, dry and durable, befitting the season, and always attracts me. It might be the symbol of a vigorous swamp. The wood is very brittle to split down in the forks, and, just broken, has a strong, somewhat liquorice-like scent. I do not know that any bird eats them.

I see a few fishes dart in the brooks.

Between winter and summer there is, to my mind, an immeasurable interval. As, when I pry into the old bank swallows' holes to-day, — see the marks of their bills and even whole eggs left at the bottom, — it affects me as the phenomena of a former geological period. Yet perchance the very swallow which laid those eggs will revisit this hole next spring. The upper side of his gallery is a low arch, quite firm and durable.

Like the water-bugs the dormant buds and catkins which overhang the brook *might* be waked up in mid-

winter, but these bugs are much the most susceptible to the genial influences.

In fact, there was a succession of these invisible cables or booms stretched across the stream, though it ran quite swiftly.

I noticed at Walden yesterday that, when the ice cracked, one part was frequently left an eighth of an inch, perhaps, higher than another, and afterward frozen to it in this position. You could both see and with your feet feel the inequality.

Jan. 25. Monday. A warm, moist day. Thermometer at 6.30 P. M. at 49°.

What a rich book might be made about buds, including, perhaps, sprouts! — the impregnable, vivacious willow catkins, but half asleep under the armor of their black scales, sleeping along the twigs; the birch and oak sprouts, and the rank and lusty dogwood sprouts; the round red buds of the blueberries; the small pointed red buds, close to the twig, of the panicled andromeda; the large yellowish buds of the swamp-pink, etc. How healthy and vivacious must he be who would treat of these things!

You must love the crust of the earth on which you dwell more than the sweet crust of any bread or cake. You must be able to extract nutriment out of a sand-heap. You must have so good an appetite as this, else you will live in vain.

The creditor is servant to his debtor, especially if he is about paying his due. I am amused to see what airs men take upon themselves when they have money

to pay me. No matter how long they have deferred it, they imagine that they are my benefactors or patrons, and send me word graciously that *if I will come to their houses* they will pay me, when it is their business to come to me.

Jan. 26. A warm rain from time to time.

P. M. — To Clintonia Swamp down the brook.

When it rains it is like an April shower. The brook is quite open, and there is no snow on the banks or fields. From time to time I see a trout glance, and sometimes, in an adjoining ditch, quite a school of other fishes, but I see no tortoises. In a ditch I see very light-colored and pretty large lizards moving about, and I suspect I may even have heard a frog drop into the water once or twice. I like to sit still under my umbrella and meditate in the woods in this warm rain.

On the side-hill at the swamp, I see how the common horizontal birch fungus is formed. I see them in all stages and of all sizes on a dead *Betula alba*, both on the upper and under sides, but always facing the ground. At first you perceive the bark merely raised into a nub and perhaps begun to split, and, removing a piece of the bark, you [find] a fibrous whitish germ like a mildew in the bark, as it were of a fungus beneath, in the bark and decayed wood. Next you will see the fungus pushed out like a hernia, about the size as well as form of a pea. At first it is of a nearly uniform convex and homogeneous surface, above and below, but very soon, or while yet no larger than a pea,

it begins to show a little horizontal flat disk, always on the under side, which you would not suspect without examining it, and the upper surface already begins to be water. So it goes on, pushing out through the bark further and further, spreading and flatting out more and more, till it has attained its growth, with a more or less elongated neck to its peninsula. The fungus as it grows fills the rent in the bark very closely, and the edges of the bark are recurved, lip-like. They commonly break off at the junction of the true bark with the wood, bringing away some of the woody fibre. Apparently the spongy decayed bark and wood is their soil.

This is a lichen day. The white lichens, partly encircling aspens and maples, look as if a painter had touched their trunks with his brush as he passed.

The yellow birch tree is peculiarly interesting. It might be described as a tree whose trunk or bole was covered with golden and silver shavings glued all over it and dangling in curls. The edges of the curls, like a line of breakers, form commonly diagonal lines up and down the tree, corresponding to the twist of the nerve or grain.

Nature loves gradation. Trees do not spring abruptly from the earth. Mosses creep up over the insteps of the trees and endeavor to reclaim them. Hence the propriety of lacing over the instep.

Is not the moccasin a more picturesque and fitter sort of shoe than ours in which to move amid the herbage?

How protean is life! One may eat and drink and

sleep and digest, and do the ordinary duties of a man, and have no excuse for sending for a doctor, and yet he may have reason to doubt if he is as truly alive or his life is as valuable and divine as that of an oyster. He may be the very best citizen in the town, and yet it shall occur to him to prick himself with a pin to see if he is alive. It is wonderful how quiet, harmless, and ineffective a living creature may be. No more energy may it have than a fungus that lifts the bark of a decaying tree. I raised last summer a squash which weighed 123½ pounds. If it had fallen on me it would have made as deep and lasting an impression as most men do. I would just as lief know what it thinks about God as what most men think, or are said to think. In such a squash you have already got the bulk of a man. My man, perchance, when I have put such a question to him, opes his eyes for a moment, essays in vain to think, like a rusty firelock out of order, then calls for a plate of that same squash to eat and goes to sleep, as it is called, — and that is no great distance to go, surely.

Melvin would have sworn he heard a bluebird the other day if it had n't been January. Some say that this particularly warm weather within a few days is the January thaw, but there is nothing to thaw. The sand-banks in the Deep Cut are as dry as in summer.

Some men have a peculiar taste for bad words, mouthing and licking them into lumpish shapes like the bear her cubs, — words like "tribal" and "ornamentation," which drag a dead tail after them. They will pick you out of a thousand the still-born words, the falsettos, the wing-clipped and lame words, as if only the false

notes caught their ears. They cry encore to all the discords.

The cocks crow in the yard, and the hens cackle and scratch, all this winter. Eggs must be plenty.

Jan. 27. Wednesday. P. M.—To Hill and beyond.

It is so mild and moist as I saunter along by the wall east of the Hill that I remember, or anticipate, one of those warm rain-storms in the spring, when the earth is just laid bare, the wind is south, and the cladonia lichens are swollen and lusty with moisture, your foot sinking into them and pressing the water out as from a sponge, and the sandy places also are drinking it in. You wander indefinitely in a beaded coat, wet to the skin of your legs, sit on moss-clad rocks and stumps, and hear the lisping of migrating sparrows flitting amid the shrub oaks, sit long at a time, still, and have your thoughts. A rain which is as serene as fair weather, suggesting fairer weather than was ever seen. You could hug the clods that defile you. You feel the fertilizing influence of the rain in your mind. The part of you that is wettest is fullest of life, like the lichens. You discover evidences of immortality not known to divines. You cease to die. You detect some buds and sprouts of life. Every step in the old rye-field is on virgin soil.

And then the rain comes thicker and faster than before, thawing the remaining frost in the ground, detaining the migrating bird; and you turn your back to it, full of serene, contented thought, soothed by the steady dropping on the withered leaves, more at home

for being abroad, more comfortable for being wet, sinking at each step deep into the thawing earth, gladly breaking through the gray rotting ice. The dullest sounds seem sweetly modulated by the air. You leave your tracks in fields of spring rye, scaring the fox-colored sparrows along the wood-sides. You cannot go home yet; you stay and sit in the rain. You glide along the distant wood-side, full of joy and expectation, seeing nothing but beauty, hearing nothing but music, as free as the fox-colored sparrow, seeing far ahead, a courageous knight [?], a great philosopher, not indebted to any academy or college for this expansion, but chiefly to the April rain, which descendeth on all alike; not encouraged by men in your walks, not by the divines nor the professors, and to the lawgiver an outlaw; not encouraged (even) when you are reminded of the government at Washington.

Time never passes so quickly and unaccountably as when I am engaged in composition, *i. e.* in writing down my thoughts. Clocks seem to have been put forward.

The ground being bare this winter, I attend less to buds and twigs. Snow covering the ground secures our attention to twigs, etc., which rise above it.

I notice a pretty large rock on the Lee farm, near the site of the old mill over the Assabet, which is quite white and bare, with the roots of a maple, cut down a few years ago, spreading over it, and a thin dark-green crust or mould, a mere patch of soil as big as a dollar, in one or two places on it. It is evident that that rock was covered as much as three inches deep with soil

a few years since, for the old roots are two inches thick, and that it has been burnt and washed off since, leaving the surface bare and white. There are a few lichens started at one end.

As I came home day before yesterday, over the railroad causeway, at sunset, the sky was overcast, but beneath the edge of the cloud, far in the west, was a narrow stripe of clear amber sky coextensive with the horizon, which reached no higher than the top of Wachusett. I wished to know how far off the cloud was by comparing it with the mountain. It had somewhat the appearance of resting on the mountain, concealing a part of its summit. I did not suppose it did, because the clouds over my head were too high for that, but when I turned my head I saw the whole outline of the mountain distinctly. I could not tell how far the edge of the cloud was beyond it, but I think it likely that that amber light came to me through a low narrow skylight, the upper sash of whose frame was forty miles distant. The amount of it is that I saw a cloud more distant than the mountain.

Steadily the eternal rain falls, — drip, drip, drip, — the mist drives and clears your sight, the wind blows and warms you, sitting on that sandy upland by the edge of the wood that April day.

Jan. 28. Minott has a sharp ear for the note of any migrating bird. Though confined to his dooryard by the rheumatism, he commonly hears them sooner than the widest rambler. Maybe he listens all day for them, or they come and sing over his house, — report

themselves to him and receive their season ticket. He is never at fault. If he says he heard such a bird, though sitting by his chimney-side, you may depend on it. He can swear through glass. He has not spoiled his ears by attending lectures and caucuses, etc. The other day the rumor went that a flock of geese had been seen flying north over Concord, midwinter as it was, by the almanac. I traced it to Minott, and yet I was compelled to doubt. I had it directly that he had heard them within a week. I saw him, — I made haste to him. His reputation was at stake. He said that he stood in his shed, — it was one of the late warm, muggy, April-like mornings, — when he heard one short but distinct *honk* of a goose. He went into the house, he took his cane, he exerted himself, or that sound imparted strength to him. Lame as he was, he went up on to the hill, — he had not done it for a year, — that he might hear all around. He saw nothing, but he heard the note again. It came from over the brook. It was a wild goose, he was sure of it. And hence the rumor spread and grew. He thought that the back of the winter was broken, — if it had any this year, — but he feared such a winter would kill him too.

I was silent; I reflected; I drew into my mind all its members, like the tortoise; I abandoned myself to unseen guides. Suddenly the truth flashed on me, and I remembered that within a week I had heard of a box at the tavern, which had come by railroad express, containing three wild geese and directed to his neighbor over the brook. The April-like morning had

excited one so that he honked; and Minott's reputation acquired new lustre.

He has a propensity to tell stories which you have no ears to hear, which you cut short and return unfinished upon him.

I notice much cotton-like down attached to the long curled-up seed-vessels of the *Epilobium angustifolium*, such as I think I have seen used in some birds' nests.

It has been spitting a little snow to-day, and we were uncertain whether it would increase or turn to rain. Coming through the village at 11 P. M., the sky is completely overcast, and the (perhaps thin) clouds are very distinctly pink or reddish, somewhat as if reflecting a distant fire, but this phenomenon is universal all round and overhead. I suspect there is a red aurora borealis behind.

Jan. 29. P. M. — To Great Meadows at Copan.

It is considerably colder. I go through the northerly part of Beck Stow's, north of the new road. For a great distance it is an exceedingly dense thicket of blueberry bushes, and the shortest way is to bend down bushes eight feet high and tread on them. The small red and yellow buds, the maze of gray twigs, the green and red sphagnum, the conspicuous yellowish buds of the swamp-pink with the diverging valves of its seed-vessels, the dried choke-berries still common, these and the like are the attractions.

The cranberry rising red above the ice is seen to be allied to the water andromeda, but is yet redder.

In the ditches on Holbrook's meadow near Copan,

I see a *Rana palustris* swimming, and much conferva greening all the water. Even this green is exhilarating, like a spring in winter. I am affected by the sight even of a mass of conferva in a ditch. I find some radical potamogeton leaves six inches long under water, which look as if growing.

Found some splendid fungi on old aspens used for a fence; quite firm; reddish-white above and bright-vermilion beneath, or perhaps more scarlet, reflecting various shades as it is turned. It is remarkable that the upper side of this fungus, which must, as here, commonly be low on decaying wood, so that we look down on it, is not bright-colored nor handsome, and it was only when I had broken it off and turned it over that I was surprised by its brilliant color. This intense vermilion (?) face, which would be known to every boy in the town if it were turned upward, faces the earth and is discovered only by the curious naturalist. Its ear is turned down, listening to the honest praises of the earth. It is like a light-red velvet or damask. These silent and motionless fungi, with their ears turned ever downward toward the earth, revealing their bright colors perchance only to the prying naturalist who turns them upward, remind me of the "Hear-all" of the story.

Jan. 30. P. M. — To Gowing's Swamp.

I thought it would be a good time to rake in the mud of that central pool, and see what animal or vegetable life might be there, now that it is frozen. I supposed

that tortoises and frogs might be buried in the mud. The pool, where there is nothing but water and sphagnum to be seen and where you cannot go in the summer, is about two rods long and one and a half wide, with that large-seeded sedge in a border a rod wide about it. Only a third of this (on one side) appears as water now, the rest a level bed of green sphagnum frozen with the water, though rising three or four inches above the general level here and there. I cut a hole through the ice, about three inches thick, in what alone appeared to be water, and, after raking out some sphagnum, found that I could not fairly reach the mud and tortoises, — if there are any there, — though my rake was five feet and nine inches long; but with the sphagnum I raked up several kinds of bugs, or insects. I then cut a hole through the frozen sphagnum nearer the middle of the pool, though I supposed it would be a mere mass of sphagnum with comparatively little water, and more mud nearer the surface. To my surprise, I found clear water under this crust of sphagnum to about five feet in depth, but still I could not reach the mud with my rake through the more decayed sphagnum beneath.

I returned to the thicket and cut a maple about eighteen feet long. This dropped down five or six feet, and then, with a very slight pressure, I put it down the whole length. I then went to the thicket again, searched a long while for a suitable pole, and at last cut another maple thirty feet long and between four and five inches thick at the butt, sharpened and trimmed and carried it on my shoulder to the spot, and, rough

as it was, it went down with very little pressure as much as twenty feet, and with a little more pressure *twenty-six feet and one inch;* and there I left it, for I had measured it first. If the top had not been so small that it bent in my hands, I could probably have forced it much further. I suspect that the depth of mud and water under where I walk in summer on the water andromeda, *Andromeda Polifolia, Kalmia glauca,* sphagnum, etc., is about the same. The whole swamp would flow off down an inclined plane. Of course there is room enough for frogs and turtles, safe from frost.

I noticed that the sap flowed very freely from one of the maples which I cut.

In the meanwhile the hole which I had first cut had skimmed over. I stooped to look at the ice-crystals. The thin skimming, which did not yet cover the whole surface, was minutely marked with feathers, as in the frost on windows in the morning. The crystallization was, as usual, in deep furrows, some a third of an inch wide and finely grained or channelled longitudinally. These commonly intersected each other so as to form triangles of various sizes, and it was remarkable that there was an elevated space between the sides of the triangles, which in some cases was not yet frozen, while you could see and feel the furrow where the crystals had shot on each side much lower. The water crystallizes in certain planes only.

It seems, then, that sphagnum will grow on the surface of water five feet deep! [1]

[1] *Vide* [pp. 271, 272].

What means the maple sap flowing in pleasant days in midwinter, when you must wait so late in the spring for it, in warmer weather? It is a very encouraging sign of life now.

Jan. 31. I notice in one place that the last six or more inches of the smooth sumach's lusty twigs are dead and withered, not having been sufficiently matured, notwithstanding the favorable autumn. This is attaining one's growth through difficulties.

Saw one faint tinge of red on red ice pond-hole, six inches over.

VII

FEBRUARY, 1858

(ÆT. 40)

Feb. 1. Measured Gowing's Swamp two and a half rods northeast of the middle of the hole, *i. e.* in the andromeda and sphagnum near its edge, where I stand in the summer; also five rods northeast of the middle of the open hole, or in the midst of the andromeda. In both these places the pole went hard at first, but broke through a crust of roots and sphagnum at about three feet beneath the surface, and I then easily pushed the pole down just twenty feet. This being a small pole, I could not push it any further holding it by the small end; it bent then. With a longer and stiffer pole I could probably have fathomed thirty feet. It seems, then, that there is, over this andromeda swamp, a crust about three feet thick, of sphagnum, andromeda (*calyculata* and *Polifolia*), and *Kalmia glauca*, etc., beneath which there is almost clear water, and, under that, an exceedingly thin mud. There can be no soil above that mud, and yet there were three or four larch trees three feet high or more between these holes, or over exactly the same water, and there were small spruces near by. For aught that appears, the swamp is as deep under the andromeda as in the middle. The two andromedas and the *Kalmia glauca* may be more

(strictly oval) red buds, nearly as big as the swamp-pink's, but rounded. The woolly stem for a couple of inches beneath the bud is frequently bare and conspicuously club-shaped. The rust on the under sides of the leaves seems of a lighter color than that of Maine. The seed-vessels (which open at the base first) still hold on. This plant might easily be confounded with the water andromeda by a careless observer. When I showed it to a teamster, he was sure that he had seen it often in the woods, but the sight of the woolly under side staggered him.

There are many small spruce thereabouts, with small twigs and leaves, an abnormal growth, reminding one of strange species of evergreen from California, China, etc. I brought some home and had a cup of tea made, which, in spite of a slight piny or turpentine flavor, I thought unexpectedly good.

An abundance of nesæa on the east edge of the pond-hole (call it Ledum Pond-hole); and is that a lysimachia mingled with it? [1]

The ledum does not grow amid the maples, — nor, indeed, does the *A. Polifolia*, *Kalmia glauca*, nor *even* the water andromeda abundantly. It bears no more shade than that of the spruce trees, which do not prevail over the above-named shrubbery. As usual with the finding of new plants, I had a presentiment that I should find the ledum in Concord. It is a remarkable fact that, in the case of the most interesting plants which I have discovered in this vicinity, I have anticipated finding them perhaps a year before the discovery.

[1] Elodea.

Feb. 5. P. M. — To Boaz's Meadow.

There is a plenty of that handsome-seeded grass which I think Tarbell called goose grass [1] in the meadow south of the roadway, at Boaz's Meadow, also in the meadows far north in the woods, and some in Minot Pratt's meadow.

Feb. 7. Aunt Louisa has talked with Mrs. Monroe, and I can correct or add to my account of January 23d. She says that she was only three or four years old, and that she went to school, with Aunt Elizabeth and one other child, to a woman named Turner, somewhere in Boston, who kept a spinning-wheel a-going while she taught these three little children. She remembers that one sat on a lignum-vitæ mortar turned bottom up, another on a box, and the third on a stool; and then repeated the account of Jennie Burns bringing her little daughter to the school, as before.

I observed yesterday in that oak stump on the ditch-bank by Trillium Wood (which I counted the rings of once) that between the twentieth and twenty-seventh rings there was only about three sevenths of an inch, though before and after this it grew very fast and seven spaces would make nearly two inches. The tree was growing lustily till twenty years old, and then for seven years it grew only one fourth or one fifth part as fast as before and after. I am curious to know what happened to it.

P. M. — To Cliffs through Wheeler's pasture on the hill.

[1] Probably glyceria.

This new pasture, with gray stumps standing thickly in the now sere sward, reminds me of a graveyard. And on these monuments you can read each tree's name, when it was born (if you know when it died), how it throve, and how long it lived, whether it was cut down in full vigor or after the infirmities of age had attacked it.

I am surprised to find the epigæa on this hill, at the northwest corner of C. Hubbard's (?) lot, *i. e.* the large wood. It extends a rod or so and is probably earlier there than where I have found it before. Some of the buds show a very little color. The leaves have lately been much eaten, I suspect by partridges. Little mounds or tufts of yellowish or golden moss in the young woods look like sunlight on the ground.

If possible, come upon the top of a hill unexpectedly, perhaps through woods, and then see off from it to the distant earth which lies behind a bluer veil, before you can see directly down it, *i. e.* bringing its own near top against the distant landscape.

In the Fair Haven orchard I see the small botrychium still fresh, but quite dark reddish. The bark of the *Populus grandidentata* there is a green clay-color.

Feb. 8. P. M. — To Walden and Goose Pond.

The ground is so completely bare this winter, and therefore the leaves in the woods so dry, that on the 5th there was a fire in the woods by Walden (Wheeler's), and two or three acres were burned over, set probably by the engine. Such a burning as commonly occurs in the spring.

The ice which J. Brown is now getting for his ice-house from S. Barrett's is from eight to nine plus inches thick, but I am surprised to find that Walden ice is only six inches thick, or even a little less, and it has not been thicker. You can almost drive an axe through it at one blow. In many places about the shore it is open a dozen feet wide, as when it begins to break up in the spring.

I observe, as usual, the shore heaved up near where my house was. It is evidently the result of its thawing. It is lifted up with an abrupt, nearly perpendicular edge nearly a foot high (but looks as if it had been crowded up by the ice), while the part under water probably has not been frozen, or has not been thawed. But in the water close to the shore I observe singular dimples in the sand, sometimes perfectly circular tunnels, etc., as if a stone had been turned round and round and then lifted out. Perhaps this ridge thus lifted up remains somewhat loose through the summer, not falling entirely back, and the next winter, therefore, freezes yet deeper and is heaved up yet higher, and so gains a little from year to year. Thus a pond may create a barrier for itself along an adjacent meadow. When it thus lifts up the shore, it lifts the trees with it, and they are upset.

At Little Goose Pond, where I am surprised to find the ice no thicker than at Walden, I raked in the middle and brought up the branches of white pines two inches thick, but perfectly sound, four rods or more from the shore. The wood has been cut about seventeen years on one side, and at least twelve or fourteen on the other,

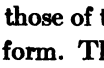
and the present growth is oak. These were the tops of pines that formerly fell into the pond. They would long since [have] decayed on land.

I walked about Goose Pond, looking for the large blueberry bushes. I see many which have thirty rings of annual growth. These grow quite on the edge, where they have escaped being cut with the wood, and have all the appearance of age, gray and covered with lichens, commonly crooked, zigzag, and intertwisted with their neighbors, — so that when you have cut one off it is hard to extract it, — and bending over nearly to the ice, with lusty young shoots running up straight by their sides. I cut one, which measured eight and a half inches in circumference at the butt, and I counted pretty accurately forty-two rings. From another I cut a straight and sound club, four feet long and six and a half inches in circumference at the small end. It is a heavy and close-grained wood.

This is the largest of the *Vaccinieæ* which grows here, or is described in Gray's Botany. Some may have borne fruit before I was born, or forty and odd years ago. Older than my cultivated fruit trees. Nobody could tell me what kind of wood it was. The biggest panicled andromeda that I saw thereabouts was only a little more than an inch in diameter and apparently not half as old. It has a much more yellow wood, with a twist to its grain.

Mrs. Monroe says that her mother respected my grandfather very much, because he was a religious man. She remembers his calling one day and inquiring where blue vervain grew, which he wanted, to make a

syrup for his cough, and she, a girl, happening to know, ran and gathered some.

Feb. 9. A. M. — To old Hunt house with Thatcher. The stairs of the old back part are white pine or spruce, each the half of a square log;  those of the cellar in front, oak, of the same form. There is no ridge-pole whatever, — not even a board, — but a steep roof; and some of the rafters are oak saplings, hewn and showing a good deal of bark, and scarcely three inches diameter at the small end; yet they have sufficed.

Saw at Simon Brown's a sketch, apparently made with a pen, on which was written, "Concord Jail, near Boston America," and on a fresher piece of paper on which the above was pasted, was written, "The jail in which General Sir Arch^{ld} Campbell & —— Wilson were confined when taken off Boston in America by a French Privateer." A letter on the back side, from Mr. Lewis of Framingham to Mr. Brown, stated that he, Lewis, had received the sketch from the grandson of Wilson, who drew it.

You are supposed to be in the jail-yard, or close to it westward, and see the old jail, gambrel-roofed, the old Hurd house (partly) west of the graveyard, the graveyard, and Dr. Hurd house, and, over the last and to the north of it, a wooded hill, apparently Windmill Hill, and just north of the Hurd house, beyond it, apparently the court-house and schoolhouse, each with belfries, and the road to the Battle-Ground, and a distant farmhouse on a hill, French's or Buttrick's, perhaps.

Begins to snow at noon, and about one inch falls, whitening the ground.

Feb. 10. Grows cold toward night, and windy.

Feb. 11. At 3 P. M. it is 11° and windy.

I think it is the coldest day of this winter. The river channel is now suddenly and generally frozen over for the first time.

P. M. — To Hill.

The water in the pitcher-plant leaves is frozen, but I see none burst. They are very tightly filled and smooth, apparently stretched.

The leaves of the round-leaved pyrola, so exposed this winter, look not only dark but as if frozen. I am not sure that they are stiffened however.[1] I see that the hemlock leaves also have this frozen or frozen-thawed, cadaverous look, dark and slightly imbrowned, especially the most exposed twigs, while some sheltered ones are still a bright green. The same is the case even with the white pines and, as far as I observe, other evergreens. There is a change in their leaves with cold weather, corresponding to the reddening and darkening of checkerberry and pyrola leaves. They change, though they do not fall, and are to some extent affected, even as those trees which, like the oaks, retain a part of their leaves during the winter in a withered state; *i. e.*, they have begun to wither or be killed. I have often before noticed that the pines, when cold weather came, were of a darker and duller green, somewhat

[1] I think not.

like a frozen apple. In the hemlock, at least, there is a positive tendency to redness. The evergreens, then, though they do not fall the first year, lose their original summer greenness; they are changed and partially killed by the cold, like pyrola and checkerberry and lambkill, and even, in a degree, like oak leaves. Perhaps the pitch pine is the least affected.

Cut a club of celtis wood. It is hard but, I think, brittle.

The celastrus (waxwork) is a soft, spongy, and flexible wood, though of very slow growth. You can easily sink your knife into it. I count twenty-five rings in the heart-wood of one which is not quite an inch in diameter. In the sap there is no evidence of rings at all.

Feb. 12. Colder than yesterday morning; perhaps the coldest of the winter.

P. M. — To Ledum Pond.

Those small holes in the ground, — musquash, mice, etc., — thickly beset with crystals of frost, remind me of the invisible vapor issuing thence which may be called Earth's breath, though you might think it were the breath of a mouse. In cold weather you see not only men's beards and the hair about the muzzles of oxen whitened with their frozen breath, but countless holes in the banks, which are the nostrils of the earth, white with the frozen earth's breath.

About the ledum pond-hole there is an abundance of that abnormal growth of the spruce. Instead of a regular, free, and open growth, you have a multitude of slender branches crowded together, putting out from

the summit or side of the stem and shooting up nearly perpendicularly, with dense, fine, wiry branchlets and fine needles, which have an impoverished look, altogether forming a broom-like mass, very much like a heath.

There is, apparently, more of the *Andromeda Polifolia* in that swamp than anywhere else in Concord.

Feb. 13. Last night said to have been a little colder than the night before, and the coldest hitherto.

P. M. — Ride to Cafferty's Swamp.

The greatest breadth of the swamp appears to be northeasterly from Adams's.

There is much panicled andromeda in it, some twelve feet high, and, as I count, seventeen years old, with yellowish wood. I saw three tupelos in the swamp, each about one foot in diameter and all within two rods. In those parts of the swamp where the bushes were not so high but that I could look over them, I observed that the swamp was variously shaded, or painted even, like a rug, with the sober colors running gradually into each other, by the colored recent shoots of various shrubs which grow densely, as the red blueberry, and the yellowish-brown panicled andromeda, and the dark-brown or blackish *Prinos verticillatus*, and the choke-berry, etc. Standing on a level with those shrubs, you could see that these colors were only a foot or so deep, according to the length of the shoots. So, too, oftener would the forests appear if we oftener stood above them.

How often vegetation is either yellow or red! as the

buds of the swamp-pink, the leaves of the pitcher-plant, etc., etc., and to-day I notice yellow-green recent shoots of high blueberry.

Observed a coarse, dense-headed grass in the meadow at Stow's old swamp lot.

What did the birds do for horsehair here formerly?

Feb. 14. About one inch of snow falls.

Feb. 15. To Cambridge and Boston.

Saw, at a menagerie, a Canada lynx, said to have been taken at the White Mountains. It looked much like a monstrous gray cat standing on stilts, with its tail cut down to five inches, a tuft of hair on each ear and a ruff under the throat.

Feb. 18. I find Walden ice to be nine and a half plus inches thick, having gained three and a half inches since the 8th.

The *Rubus hispidus* (*sempervirens* of Bigelow) is truly evergreen. There has been so little snow this winter that I have noticed it the more, — red, glossy, and, as it were, plaited.

I see the ice, three inches thick, heaved up tentwise eighteen inches or more in height, near the shore, yet where the water is too deep for the bottom to have been heaved, as if some steam had heaved it.

At Brister's further spring, the water which trickles off in various directions between and around little mounds of green grass half frozen, when it reaches the more mossy ground runs often between two per-

pendicular walls of ice, as at the bottom of a cañon, the top of these perfectly square-edged banks being covered with the moss that originally covered the ground (otherwise undisturbed) and extending several feet on each side at the same level. These icy cliffs are of a loose crystalline composition, with many parallel horizontal seams, as if built up. I suppose that the water flows just under the moss, and, freezing, heaves it one stage; then the next night, perchance, new water, flowing underneath, heaves the whole another stage; and so on, steadily lifting it up.

Far from here, I see the surface of weeds and mud lifted up in like manner where there is no cañon or rill, but a puddle.

George Minott tells me that he, when young, used often to go to a store by the side of where Bigelow's tavern was and kept by Ephraim Jones, — the Goodnow store. That was probably the one kept by my old trader. Told me how Casey, who was a slave to a man — Whitney — who lived where Hawthorne owns, — the same house, — before the Revolution, ran off one Sunday, was pursued by the neighbors, and hid himself in the river up to his neck till nightfall, just across the Great Meadows. He ran through Gowing's Swamp and came back that night to a Mrs. Cogswell, who lived where Charles Davis does, and got something to eat; then cleared far away, enlisted, and was freed as a soldier after the war. Whitney's boy threw snowballs at him the day before, and finally C., who was chopping in the yard, threw his axe at him, and W. said he was an ugly nigger and he must put him in

jail. He may have been twenty years old when stolen from Africa; left a wife and one child there. Used to say that he went home to Africa in the night and came back again in the morning; *i. e.*, he dreamed of home. Lived to be old. Called Thanksgiving "Tom Kiver."

Feb. 19. Coldest morning this winter by our thermometer, − 3° at 7.30.

The traveller is defended and calloused. He deals with surfaces, has a greatcoat on. But he who stays at home and writes about homely things gives us naked and tender thoughts and sentiments.

Feb. 20. Snows all day. The most wintry day of the winter; yet not more than three inches on a level is fallen.

We hear the names of the worthies of Concord, — Squire Cuming and the rest, — but the poor slave Casey seems to have lived a more adventurous life than any of them. Squire Cuming probably never had to run for his life on the plains of Concord.

Feb. 24. I see, at Minot Pratt's, rhodora in bloom in a pitcher with water andromeda.

Went through that long swamp northeast of Boaz's Meadow. Interesting and peculiar are the clumps, or masses, of panicled andromeda, with light-brown stems, topped uniformly with very distinct yellow-brown recent shoots, ten or twelve inches long, with minute red buds sleeping close along them. This uniformity in such masses gives a pleasing tinge to the

swamp's surface. Wholesome colors, which wear well. I see quite a number of emperor moth cocoons attached to this shrub, some hung round with a loose mass of leaves as big as my two fists. What art in the red-eye to make these two adjacent maple twigs serve for the rim of its pensile basket, inweaving them! Surely it finds a place for itself in nature between the two twigs of a maple.

On the side of the meadow moraine just north of the boulder field, I see barberry bushes three inches in diameter and ten feet high. What a surprising color this wood has! It splits and splinters very much when I bend it. I cut a cane and, shaving off the outer bark, it is of imperial yellow, as if painted, fit for a Chinese mandarin.

Feb. 25. Ice at Walden eleven inches thick and very soggy, sinking to a level with the water, though there is but a trifling quantity of snow on it. Does it not commonly begin to be soggy even thus early, and thick, sinking deeper? I hear of sudden openings in ponds — as at Cochituate — this year.

Feb. 27. A. M. — To Hill.

The hedges on the Hill are all cut off. The journals think they cannot say too much on improvements in husbandry. It is a safe theme, like piety. But for me, as for one of these farms brushed up, — a model farm, — I had as lief see a patent churn and a man turning it. It is simply a place where somebody is making money.[1]

[1] [*Maine Woods*, p. 171; Riv. 210.]

I see a snow bunting, though it is pleasant and warm.

Feb. 28. P. M. — To White Pond.

I see twenty-four cones brought together under one pitch pine in a field, evidently gnawed off by a squirrel, but not opened. Rice says he saw a whistler (?) duck to-day.

VIII

MARCH, 1858

(ÆT. 40)

March 1. The divergent open capsules (?) of the rhodora, yellowish-brown, are quite interesting when the sun falls on them. We have just had a winter with absolutely no sleighing, which I do not find that any one distinctly remembers the like of. It may have been as warm before, but with more snow. It was wonderfully warm and pleasant up to the 10th of February, and since then the greatest degree of cold I have heard of was −4°. The ground has been partially covered or whitened only since the 20th. It has been an excellent winter for walking in the swamps, or walking anywhere, and for lumbering operations in Maine, there being not too much snow, and yet the swamps, etc., frozen there.

March 2. Snowed last night and this morning, about seven inches deep, much more than during the winter, the first truly wintry-looking day so far as snow is concerned; but the snow is quite soft or damp, lodging in perpendicular walls on the limbs, white on black. But it is as yet neither wheeling nor sleighing, the ground being muddy.

I remember to have seen these wood-lots being cut this winter: a little on the southwest edge of R. W. E.'s

Pinnacle; Stow's, up to east end of cold pool; northwest corner of Gowing's, next Great Fields and Moore; an acre or more of the southwest part of the Dennis swamp by railroad; Cyrus Hosmer's, southwest of Desert; and west of Marlborough road; except north part of last.

I walk through the Colburn farm pine woods by railroad and thence to rear of John Hosmer's. See a large flock of snow buntings, the white birds of the winter, rejoicing in the snow. I stand near a flock in an open field. They are trotting about briskly over the snow amid the weeds, — apparently pigweed and Roman wormwood, — as it were to keep their toes warm, hopping up to the weeds. Then they restlessly take to wing again, and as they wheel about one, it is a very rich sight to see them dressed in black and white uniforms, alternate black and white, very distinct and regular. Perhaps no colors would be more effective above the snow, black tips (considerably more) to wings, then clear white between this and the back, which is black or very dark again. One wonders if they are aware what a pleasing uniform appearance they make when they show their backs thus. They alight again equally near. Their track is much like a small crow's track, showing a long heel and furrowing the snow between with their toes.

The last new journal thinks that it is very liberal, nay, bold, but it dares not publish a child's thought on important subjects, such as life and death and good books. It requires the sanction of the divines just as surely as the tamest journal does. If it had been pub-

lished at the time of the famous dispute between Christ and the doctors, it would have published only the opinions of the doctors and suppressed Christ's. There is no need of a law to check the license of the press. It is law enough, and more than enough, to itself. Virtually, the community have come together and agreed what things shall be uttered, have agreed on a platform and to excommunicate him who departs from it, and not one in a thousand dares utter anything else. There are plenty of journals brave enough to say what they think about the government, this being a free one; but I know of none, widely circulated or well conducted, that dares say what it thinks about the Sunday or the Bible. They have been bribed to keep dark. They are in the service of hypocrisy.

March 4. Thermometer 14° this morning, and this makes decent sleighing of the otherwise soft snow.

Father Rasle's dictionary of the Abenaki language amounts to a very concentrated and trustworthy natural history of that people, though it was not completed. What they have a word for, they have a thing for. A traveller may tell us that he *thinks* they used a pavement, or built their cabins in a certain form, or soaked their seed corn in water, or had no beard, etc., etc.; but when one gives us the word for these things, the question is settled, — that is a clincher. Let us know what words they had and how they used them, and we can infer almost all the rest. The lexicographer not only *says* that a certain people have or do a certain thing, but, being evidently a disinterested party, it

may be allowed that he brings sufficient evidence to prove it. He does not so much assert as exhibit. He has no transient or private purpose to serve.

The snow *balls* particularly when, as now, colder weather comes after a damp snow has fallen on muddy ground, and it is soft beneath while just freezing above.

I grow so fast and am so weighed down and hindered, that I have to stop continually and look for a rock where I may kick off these newly acquired heels and soles.

March 5. Went to hear a Chippeway Indian, a Doctor Mung-somebody, — assisted by a Penobscot, who said nothing. He made the audience laugh unintentionally by putting an *m* after the word *too*, which he brought in continually and unnecessarily, and almost after this word alone, emphasizing and prolonging that sound, as, "They carried them home toom-ah," as if it were a necessity for bringing in so much of the Indian language for a relief to his organs or a compensation for "twisting his jaws about," as he said, in his attempt to speak English. So Polis and the Penobscots continually put the *um* or *em* to our words, — as *paddlum*, *littlum*, etc. There was so much of unsubdued Indian accent resounding through his speech, so much of the "bow-arrow tang!" I have no doubt it was a great relief to him and seemed the word best pronounced.[1]

He thought his ancestors came from Asia, and was sure that Behring's Strait was no obstacle, since Indians of his tribe cross Lakes Huron and Superior in

[1] [*Maine Woods*, p. 187; Riv. 230, 231.]

birch-bark canoes. Thought Indians might be Jews, because of a similarity of customs. When a party of his warriors wish to tell an advanced party concealed in a dangerous position to retreat, they shoot an arrow close past them; if to stay, they shoot an arrow over their heads; and exactly this, he declared, the Jews did. I inferred from his statement that the totem (a deer in his case) takes the place of the surname with us, for he said that his children would have the same totem. He did not use this word. Said they had a secret fraternity like the Masonic, by which they knew and befriended members anywhere.

Had some ornaments of snake-skins, four or five inches broad, with a bead edging, — broad belts, — worn diagonally across the breast or for a garter, or for a very large and broad string handle to a bag, passing round the neck. Also an otter-skin pouch. The head left on was evidently very convenient as well as important, to hold it when caught under the belt. It was thus very quickly returned to its place. Had head, feet, and all. Had on an eagle-feather cap, *i. e.* a band with long black eagles' feathers standing from it. This not worn every day. A buffalo-skin blanket, worked with porcupine quills.

Showed the cradle. The mother cuts a notch in the lower end for each day that passes and one at the top for each moon. If it falls into the water it floats on this. Said the first poetry made at Plymouth was suggested by the sight of this cradle swinging from a tree, *viz.* "Rock-a-by, baby," etc.

Exhibited very handsome birch-bark trays, orna-

mented with moose-hair inworked in the false bottom and side, representing strawberries, etc., very well. Only the white hair was not dyed. These were made without communication with the whites.

They place the feet of the child in the cradle straight, or as they would have them. Indians step with the feet straight, but whites, who toe out, seem to have no use for any toes but the great one in walking. Indian women are brought up to toe in. It is improper for them to toe out. Shot small arrows through a blow-gun very straight at an apple a rod off, lodging them all in it. The gun was of elder with the pith out, about six feet long; the arrows, quite slender, of hard wood, with a large and dense cylindrical mass of thistle-down at what is commonly the feathered end.

The Penobscot, who chanced to be Joe Polis's brother, told me that the *shecorway* of the Maine lakes was the sheldrake, and that when they call out the moose at night they imitate the voice of the cow moose. That of the bull is very different.

The former carried the cradle low down on his back with a strap round his head, and showed how the mother had both hands free and could chop wood, etc., with her infant on her back. The same blanket covered both if necessary, and the child was prevented from being smothered by the bow over its face holding up the blanket. He regretted that their marriage customs were not so good as ours, that they did not choose for themselves but their parents for them.

We read the English poets; we study botany and zoölogy and geology, lean and dry as they are; and

it is rare that we get a new suggestion. It is ebb-tide with the scientific reports, Professor —— in the chair. We would fain know something more about these animals and stones and trees around us. We are ready to skin the animals alive to come at them. Our scientific names convey a very partial information only; they suggest certain thoughts only. It does not occur to me that there are other names for most of these objects, given by a people who stood between me and them, who had better senses than our race. How little I know of that *arbor-vitæ* when I have learned only what science can tell me! It is but a word. It is not a *tree* of *life*. But there are twenty words for the tree and its different parts which the Indian gave, which are not in our botanies, which imply a more practical and vital science. He used it every day. He was well acquainted with its wood, and its bark, and its leaves. No science does more than arrange what knowledge we have of any class of objects. But, generally speaking, how much more conversant was the Indian with any wild animal or plant than we are, and in his language is implied all that intimacy, as much as ours is expressed in our language. How many words in his language about a moose, or birch bark, and the like! The Indian stood nearer to wild nature than we. The wildest and noblest quadrupeds, even the largest fresh-water fishes, some of the wildest and noblest birds and the fairest flowers have actually receded as *we* advanced, and we have but the most distant knowledge of them. A rumor has come down to us that the skin of a lion was seen and his roar heard

here by an early settler. But there was a race here that slept on his skin. It was a new light when my guide gave me Indian names for things for which I had only scientific ones before. In proportion as I understood the language, I saw them from a new point of view.

A dictionary of the Indian language reveals another and wholly new life to us. Look at the word "canoe," and see what a story it tells of outdoor life, with the names of all its parts and modes of using it, as our words describing the different parts and seats of a coach, — with the difference in practical knowledge between him who rides and him who walks; or at the word "wigwam," and see how close it brings you to the ground; or "Indian corn," and see which race was most familiar with it. It reveals to me a life within a life, or rather a life without a life, as it were threading the woods between our towns still, and yet we can never tread in its trail. The Indian's earthly life was as far off from us as heaven is.

I saw yesterday a musquash sitting on thin ice on the Assabet, by a hole which it had kept open, gnawing a white root. Now and then it would dive and bring up more. I waited for it to dive again, that I might run nearer to it meanwhile, but it sat ten minutes all wet in the freezing wind while my feet and ears grew numb, so tough it is; but at last I got quite near. When I frightened it, it dove with a sudden slap of its tail. I feel pretty sure that this is an involuntary movement, the tail by the sudden turn of the body being brought down on the water or ice like a whip-lash.

March 6. P. M. — Up river on ice to Fair Haven Pond.

The river is frozen more solidly than during the past winter, and for the first time for a year I could cross it in most places. I did not once cross it the past winter, though by choosing a safe place I might have done so, without doubt, once or twice. But I have had no river walks before.

I see the first hen-hawk, or hawk of any kind, methinks, since the beginning of winter. Its scream, even, is inspiring as the voice of a spring bird.

That light spongy bark about the base of the nesæa appears to be good tinder. I have only to touch one end to a coal, and it all burns up slowly, without blazing, in whatever position held, and even after being dipped in water.

March 7. Walking by the river this afternoon, it being half open and the waves running pretty high, — the black waves, yellowish where they break over ice, — I inhale a fresh, meadowy, spring odor from them which is a little exciting. It is like the fragrance of tea to an old tea-drinker.

March 8. Went to a concert of instrumental music this evening. The imitations of the horn and the echo by the violoncello were very good, but the sounds of the clarionet were the most liquid and melodious. It is a powerful instrument and filled the hall, realizing my idea of the shepherd's pipe. It was a conduit of gurgling melody, but it apparently required a great

effort of the lungs. Its sounds entered every cranny of the hall and filled it to repletion with sweet liquid melody. There was no squeaking, no jarring string, no fuzzy breathing, no rattling stops; but pure melody, flowing in its own invisible and impalpable channels.

March 9. About three inches more of snow fell last night, which, added to about five of the old, makes eight, or more than before since last spring. Pretty good sleighing.

The State commonly grants a tract of forest to make an academy out of,[1] for such is the material of which our institutions are made, though only the crudest part of it is used, but the groves of the academy are straightway cut down, and that institution is built of its lumber, its coarsest and least valuable part. Down go the groves of the academy and up goes its frame, — on some bare common far away. And as for the public domains, if anybody neglected his civil duties during the last war, he is privileged to cut and slash there, — he is let loose against one hundred and sixty acres of well-behaved trees, as if the liberty he had defended was derived from *liber*, *bark*, and meant the liberty to bark the trees.

March 14. P. M. — I see a *Fringilla hyemalis*, the first bird, perchance, — unless one hawk, — which is an evidence of spring, though they lingered with us the past unusual winter, at least till the 19th of January. They are now getting back earlier than our per-

[1] [*Maine Woods*, p. 252; Riv. 312.]

manent summer residents. It flits past with a rattling or grating chip, showing its two white tail-feathers.

The sleighing which began the 4th of March is now done, the only sleighing since the winter of '56–7.

I hear that many cherry-birds have been seen. I think I have seen many more tracks of skunks within two or three weeks than all the winter before; as if they were partially dormant here in the winter, and came out very early, *i. e.*, perhaps some of them are more or less dormant.

March 16. P. M. — To Conantum.

A thick mist, spiriting away the snow. Very bad walking. This fog is one of the first decidedly spring signs; also the withered grass bedewed by it and wetting my feet. A still, foggy, and rather warm day. I heard this morning, also, quite a steady warbling from tree sparrows on the dripping bushes, and that peculiar drawling note of a hen, who has this peevish way of expressing her content at the sight of bare ground and mild weather. The crowing of cocks and the cawing of crows tell the same story. The ice is soggy and dangerous to be walked on.

How conversant the Indian who lived out of doors, who lay on the ground, must have been with mouse-ear leaves, pine-needles, mosses, and lichens, which form the crust of the earth. No doubt he had names accordingly for many things for which we have no popular names.

I walk in muddy fields, hearing the tinkling of new-born rills. Where the melted snow has made a swift rill in the rut of a cart-path, flowing over an icy bottom

and between icy banks, I see, just below a little fall of one inch, a circular mass of foam or white bubbles nearly two inches in diameter, slowly revolving but never moving off. The swift stream at the fall appears to strike one side, as it might the side of a water-wheel, and so cause it to revolve, but in the angle between this and the fall, and half an inch distant, is another circle of bubbles, individually larger and more evanescent, only half an inch in diameter, revolving very rapidly in the opposite direction. The laws, perchance, by which the world was made, and according to which the systems revolve, are seen in full operation in a rill of melted snow.

March 17. Hear the first bluebird.

P. M. — To the Hill.

A remarkably warm and pleasant day with a south or southwest wind, but still very bad walking, the frost coming out and the snow that was left going off. The air is full of bluebirds. I hear them far and near on all sides of the hill, warbling in the tree-tops, though I do not distinctly see them.

I stand by the wall at the east base of the hill, looking over the alder meadow, lately cut off. I am peculiarly attracted by its red-brown maze, seen in this bright sun and mild southwest wind. It has expression in it as a familiar freckled face. Methinks it is about waking up, though it still slumbers. See the still, smooth pools of water in its midst, almost free from ice. I seem to hear the sound of the water soaking into it, — as it were its voice.

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We must not expect it to blow warm long at a time. Even to-day, methinks, there are cool veins in the air, as if some puffs came over snow and ice and others not, like the meat which consisted alternately of a streak of fat and a streak of lean.

I sit on the bank at the Hemlocks and watch the great white cakes of ice going swiftly by. Now one strikes a rock and swings round in an eddy. They bear on them the wrecks and refuse of the shore where they were formed. Even the shade is agreeable to-day. You hear the buzzing of a fly from time to time, and see the black speck zigzag by.

Ah! there is the note of the first flicker, a prolonged, monotonous *wick-wick-wick-wick-wick-wick*, etc., or, if you please, *quick-quick*, heard far over and through the dry leaves. But how that single sound peoples and enriches all the woods and fields! They are no longer the same woods and fields that they were. This note really *quickens* what was dead. It seems to put a life into withered grass and leaves and bare twigs, and henceforth the days shall not be as they have been. It is as when a family, your neighbors, return to an empty house after a long absence, and you hear the cheerful hum of voices and the laughter of children, and see the smoke from the kitchen fire. The doors are thrown open, and children go screaming through the hall. So the flicker dashes through the aisles of the grove, throws up a window here and cackles out it, and then there, airing the house. It makes its voice ring up-stairs and down-stairs, and so, as it were, fits it for its habitation and ours, and takes possession.

It is as good as a housewarming to all nature. Now I hear and see him louder and nearer on the top of the long-armed white oak, sitting very upright, as is their wont, as it were calling for some of his kind that may also have arrived.

As usual, I have seen for some weeks on the ice these peculiar (perla?) insects with long wings and two tails.

The withered vegetation, seed-vessels of all kinds, etc., are peculiarly handsome now, having been remarkably well preserved the past winter on account of the absence of snow.

How indulgent is Nature, to give to a few common plants, like checkerberry, this aromatic flavor to relieve the general insipidity! Perhaps I am most sensible of the presence of these plants when the ground is first drying at this season and they come fairly out. Also mouse-ear and pyrola.

Sitting under the handsome scarlet oak beyond the hill, I hear a faint note far in the wood which reminds me of the robin. Again I hear it; it is he, — an occasional peep. These notes of the earliest birds seem to invite forth vegetation. No doubt the plants concealed in the earth hear them and rejoice. They wait for this assurance.

Now I hear, when passing the south side of the hill, or first when threading the maple swamp far west of it, the *tchuck tchuck* of a blackbird, and after, a distinct *conqueree*. So it is a red-wing?

Thus these four species of birds have all come in one day, no doubt to almost all parts of the town.

March 18. 7 A. M. — By river.

Almost every bush has its song sparrow this morning, and their tinkling strains are heard on all sides. You see them just hopping under the bush or into some other covert, as you go by, turning with a jerk this way and that, or they flit away just above the ground, which they resemble. It is the prettiest strain I have heard yet. Melvin is already out in his boat for all day, with his white hound in the prow, bound up the river for musquash, etc., but the river is hardly high enough to drive them out.

P. M. — To Fair Haven Hill *via* Hubbard's Bath.

How much more habitable a few birds make the fields! At the end of winter, when the fields are bare and there is nothing to relieve the monotony of the withered vegetation, our life seems reduced to its lowest terms. But let a bluebird come and warble over them, and what a change! The note of the first bluebird in the air answers to the purling rill of melted snow beneath. It is eminently soft and soothing, and, as surely as the thermometer, indicates a higher temperature. It is the accent of the south wind, its vernacular. It is modulated by the south wind. The song sparrow is more sprightly, mingling its notes with the rustling of the brash along the watersides, but it is at the same time more *terrene* than the bluebird. The first woodpecker comes screaming into the empty house and throws open doors and windows wide, calling out each of them to let the neighbors know of its return. But heard further off it is very suggestive of ineffable

associations which cannot be distinctly recalled, — of long-drawn summer hours, — and thus it, also, has the effect of music. I was not aware that the capacity to hear the woodpecker had slumbered within me so long. When the blackbird gets to a *conqueree* he seems to be dreaming of the sprays that are to be and on which he is to perch. The robin does not come singing, but utters a somewhat anxious or inquisitive peep at first. The song sparrow is immediately most at home of any that I have named. I see this afternoon as many as a dozen bluebirds on the warm side of a wood.

At Hubbard's shore, where a strong but warm westerly wind is blowing, the shore is lined for half a rod in width with pulverized ice, or "brash," driven against it.

At Potter's sand-hill (Bear Garden), I see, on the southeast side of the blue-curls, very distinct and regular arcs of circles (about a third of a circle), scored deep in the sand by the tops of these weeds, which have been blown about by the wind, and these marks show very surely and plainly how the wind has been blowing and with what force and flawiness.

The rather warm but strong wind now roars in the wood — as in the maple swamp — with a novel sound. I doubt if the same is ever heard in the winter. It apparently comes at this season, not only to dry the earth but to wake up the trees, as it were, as one would awake a sleeping man with a smart shake. Perchance they need to be thus wrung and twisted, and their sap flows the sooner for it.

Perfectly dry sand even is something attractive now,

and I am tempted to tread on and to touch it, as a curiosity. Skunks' tracks are everywhere now, on the sand, and the little snow that is left.

The river is still closed with ice at Cardinal Shore, so Melvin must have stopped here at least; but there is a crescent of "brash" there, which the waves blown up-stream have made, half a dozen rods wide. It is even blown a rod on to the solid ice. The noise made by this brash undulating and grating upon itself, at a little distance, is very much like the rustling of a winrow of leaves disturbed by the winds. A little farther off it is not to be distinguished from the roar of the wind in the woods.

Each new year is a surprise to us. We find that we had virtually forgotten the note of each bird, and when we hear it again it is remembered like a dream, reminding us of a previous state of existence. How happens it that the associations it awakens are always pleasing, never saddening; reminiscences of our sanest hours? The voice of nature is always encouraging.

The blackbird — probably grackle this time — wings his way direct above the swamp northward, with a regular *tchuck*, carrier haste, calling the summer months along, like a hen her chickens.

When I get two thirds up the hill, I look round and am for the hundredth time surprised by the landscape of the river valley and the horizon with its distant blue scalloped rim. It is a spring landscape, and as impossible a fortnight ago as the song of birds. It is a deeper and warmer blue than in winter, methinks. The snow is off the mountains, which seem even to

have come again like the birds. The undulating river is a bright-blue channel between sharp-edged shores of ice retained by the willows. The wind blows strong but warm from west by north, so that I have to hold my paper tight when I write this, making the copses creak and roar; but the sharp tinkle of a song sparrow is heard through it all. But ah! the needles of the pine, how they shine, as I look down over the Holden wood and westward! Every third tree is lit with the most subdued but clear ethereal light, as if it were the most delicate frostwork in a winter morning, reflecting no heat, but only light. And as they rock and wave in the strong wind, even a mile off, the light courses up and down there as over a field of grain; *i. e.*, they are alternately light and dark, like looms above the forest, when the shuttle is thrown between the light woof and the dark web, weaving a light article, — spring goods for Nature to wear. At sight of this my spirit is like a lit tree. It runs or flashes over their parallel boughs as when you play with the teeth of a comb. The pine-tops wave like squirrels' tails flashing in the air. Not only osiers but pine-needles, methinks, shine in the spring, and arrowheads and railroad rails, etc., etc. Anacreon noticed the same. Is it not the higher sun, and cleansed air, and greater animation of nature? There is a warmer red to the leaves of the shrub oak, and to the tail of the hawk circling over them.

I sit on the Cliff, and look toward Sudbury. I see its meeting-houses and its common, and its fields lie but little beyond my ordinary walk, but I never played on its common nor read the epitaphs in its graveyard,

and many strangers to me dwell there. How distant in all important senses may be the town which yet is within sight! We see beyond our ordinary walks and thoughts. With a glass I might perchance read the time on its clock. How circumscribed are our walks, after all! With the utmost industry we cannot expect to know well an area more than six miles square, and yet we pretend to be travellers, to be acquainted with Siberia and Africa!

Going by the epigæa on Fair Haven Hill, I thought I would follow down the shallow gully through the woods from it, that I might find more or something else. There was an abundance of checkerberry, as if it were a peculiar locality for shrubby evergreens. At first the checkerberry was green, but low down the hill it suddenly became dark-red, like a different plant, as if it had been more subject to frost there, it being more frosty lower down. Where it was most turned, that part of the leaf which was protected by another overlapping it was still pure bright-green, making a pretty contrast when you lifted it. Eight or ten rods off I noticed an evergreen shrub with the aspect or habit of growth of the juniper, but, as it was in the woods, I already suspected it to be what it proved, the American yew, already strongly budded to bloom. This is a capital discovery. I have thus found the ledum and the taxus this winter and a new locality of the epigæa.

March 19. P. M. — To Hill and Grackle Swamp. Another pleasant and warm day. Painted my boat

this afternoon. These spring impressions (as of the apparent waking up of the meadow described day before yesterday) are not repeated the same year, at least not with the same force, for the next day the same phenomenon does not surprise us. Our appetite has lost its edge. The other day the face of the meadow wore a peculiar appearance, as if it were beginning to wake up under the influence of the south-west wind and the warm sun, but it cannot again this year present precisely that appearance to me. I have taken a step forward to a new position and must see something else. You perceive, and are affected by, changes too subtle to be described.

I see little swarms of those fine fuzzy gnats in the air. I am behind the Hemlocks. It is their wings which are most conspicuous, when they are in the sun. Their bodies are comparatively small and black, and they have two mourning plumes in their fronts. Are not these the winter gnat? They keep up a circulation in the air like water-bugs on the water. They people a portion of the otherwise vacant air, being apparently fond of the sunshine, in which they are most conspicuous. Sometimes a globular swarm two feet or more in diameter, suggesting how genial and habitable the air is become.

I hear turkeys gobble. This too, I suppose, is a spring sound. I hear a steady sigh of the wind, rising and swelling into a roar, in the pines, which seems to tell of a long, warm rain to come.

I see a white pine which has borne fruit in its ninth year. The cones, four in number, which are seven

eighths of an inch long, have stems about two and a half inches long! — not yet curving down; so the stem probably does not grow any more.

Met Channing and walked on with him to what we will call Grackle Swamp, admiring the mosses; those bright-yellow hypnums (?), like sunlight on decaying logs, and jungermannia, like sea-mosses ready spread.

Hear the phebe note of a chickadee. In the swamp, see grackles, four or five, with the light ring about eye, — their bead eyes. They utter only those ineffectual *split* notes, no *conqueree*.

Might I not call that Hemlock Brook? and the source of it *Horse-skull* Meadow?

Hear the pleasant *chill-lill* of the *F. hyemalis*, the first time have heard this note. This, too, suggests pleasant associations.

By the river, see distinctly red-wings and hear their *conqueree*. They are not associated with grackles. They are an age before their cousins, have attained to clearness and liquidity. They are officers, epauletted; the others are rank and file. I distinguish one even by its flight, hovering slowly from tree-top to tree-top, as if ready to utter its liquid notes. Their whistle is very clear and sharp, while the grackle's is ragged and split.

It is a fine evening, as I stand on the bridge. The waters are quite smooth; very little ice to be seen. The red-wing and song sparrow are singing, and a flock of tree sparrows is pleasantly warbling. A new era has come. The red-wing's *gurgle-ee* is heard when smooth waters begin; they come together. One or two boys

are out trying their skiffs, even like the fuzzy gnats in the sun, and as often as one turns his boat round on the smooth surface, the setting sun is reflected from its side.

I feel reproach when I have spoken with levity, when I have made a jest, of my own existence. The makers have thus secured seriousness and respect for their work in our very organization. The most serious events have their ludicrous aspect, such as death; but we cannot excuse ourselves when we have taken this view of them only. It is pardonable when we spurn the proprieties, even the sanctities, making them stepping-stones to something higher.

March 20. A. M. — By river.

The tree sparrow is perhaps the sweetest and most melodious warbler at present and for some days. It is peculiar, too, for singing in concert along the hedge-rows, much like a canary, especially in the mornings. Very clear, sweet, melodious notes, between a twitter and a warble, of which it is hard to catch the strain, for you commonly hear many at once. The note of the *F. hyemalis*, or *chill-lill*, is a jingle, with also a shorter and drier *crackling* or shuffling chip as it flits by. I hear now, at 7 A. M., from the hill across the water, probably the note of a woodpecker, I know not what species; not that very early *gnah gnah*, which I have not heard this year. Now first I hear a very short robin's song.

P. M. — To Clematis Brook *via* Lee's with C.

We cross the Depot Field, which is fast becoming dry and hard. At Hubbard's wall, how handsome the willow catkins! Those wonderfully bright silvery buttons, so regularly disposed in oval schools in the air, or, if you please, along the seams which their twigs make, in all degrees of forwardness, from the faintest, tiniest speck of silver, just peeping from beneath the black scales, to lusty pussies which have thrown off their scaly coats and show some redness at base on a close inspection. These fixed swarms of arctic buds spot the air very prettily along the hedges. They remind me somewhat by their brilliancy of the snow-flecks which are so bright by contrast at this season when the sun is high. Is not this, perhaps, the earliest, most obvious, awakening of vegetable life? [1]

Farmer told me this morning that he found a bay-wing's egg yesterday, dropped in a footpath! I have not seen that bird yet.

In low grounds we feel from time to time the icy crust in the soil sink beneath us, but it is so dry that we need no rubbers now. A small ant fallen on water and swimming. A small brown grasshopper jumps into a brook at our approach and, drifting down, clings to a stubble. I see another just like it two hours later. We look into that pool on the south side of Hubbard's Grove, and admire the green weeds, water purslane (?), at the bottom. There is, slowly moving along in it near the bottom, one of those bashaws with two tails, — in this case *red* tails, — something devil's-needle-like.

[1] They are grayish and not nearly so silvery a week or ten days later, when more expanded, showing the dark scales.

Willow Catkins

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The whole pool is full of a small gyrating insect. I took up from a weed within it, by a chance sweep of my hand, a minute bivalve clam-like shell hardly one twentieth of an inch long. Yet this dries up in summer. The other pool near by, within the woods, is still covered with black soggy ice.

The herbaceous plants have evidently suffered far more than usual the past wonderfully mild and snowless winter. Not only is there less green in the fields, but even less at the bottoms of the pools and ditches.

The foul flanks of the cattle remind me how early it is still in the spring.

On that same tree by Conant's orchard, I see a flock of cherry-birds with that alert, chieftain-like look, and hear their *seringo* note, as if made by their swift flight through the air. They have been seen a week or two.

Fair Haven is still closed. Near the open water where the river is eating up into it, the ice is very *black*, even *sooty*, here and there, from this point of view. You would not believe that mere water-logged ice could be so black. You cannot now get on to it, but you see the holes which pickerel-fishers cut in it a month ago.

We go looking in vain for ducks, — a semiriparial walk. From time to time we are deceived a moment by a shining cake of ice on its edge at a distance.

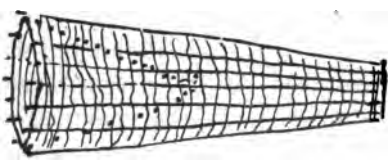
We go along behind Lee's, looking out over the Sudbury meadows. I see a distant roof at Round Hill. It is pleasant when we see thus only the roof of a house at a distance, a mere gray scale, diamond-shape, against the side of a hill, while all the lower part is lost in shade. It is more interesting than a full view.

The river but yesterday was a bright-blue artery between straight edgings of ice held by the bushes, but beyond, on each side, was a clear canal. To-day most of this ice is drifted down the stream or blown across it, so that often the straight edge is presented to the opposite meadow and is at first sight unaccountable.

The wind shifts to east or southeast, but still its rawness is agreeable. As C. says of the water insects, we too come out of our shells in the spring. Yes, we take off our greatcoats.

I had noticed from the Cliff by Lee's road an elevated sandy point above Pole Brook which I said must be Indian ground, and, walking there, I found a piece of a soapstone pot.

In the sluiceway of Pole Brook, by the road just beyond, I found another kind of Indian pot. It was an eel-pot (?) or creel, a wattled basket or wickerwork, made of willow osiers with the bark on, very artfully. It was about four feet long and shaped thus:



Moore says that he used to find them in the brooks when he was trout-fishing, stopping them up so closely with sticks and stones on the sides that not a trout could pass, and he would cut them from end to end with his knife. About a dozen (or more) willow sticks, as big [as] one's finger or larger, being set small end down in a circle, in a thin round board which made the bottom, and then smaller osiers interwoven at right angles with them, close and firm. Another funnel-shaped basket was

secured within this, extending about half-way down it, as represented by the dotted lines, with an opening hardly two inches wide at the bottom, where only a dozen sharped sticks approached each other. There was a square door in the board bottom, by which the fishes could be taken out. This was set in that sluiceway, with the mouth or broad end down-stream, all sunk beneath the surface, the fishes being now evidently running up the brooks from the river and ponds, the ice being mostly gone out of the meadows and brooks. We raised this and found eight or ten small pickerel in it, the biggest a foot long, and one good-sized perch. It was pleasant to find that any were practicing such cunning art in the outskirts.[1] I am not sure whether this invention is Indian or derived from our own ancestors. "Creel" appears to be an old English word. But I have no doubt that the Indians used something very like this. How much more we might have learned of the aborigines if they had not been so reserved! Suppose they had generally become the laboring class among the whites, that my father had been a farmer and had an Indian for his hired man, how many aboriginal ways we children should have learned from them! It was very pleasant to meet with this kind of textile or basket in our walk, to know that some had leisure for other things than farming and town meeting, and that they felt the spring influence in their way. That man was not fitting for the State prison when he was weaving that creel. He was meditating a small poem

[1] Minott has known them to be set for musquash, and sometimes the musquash gnaw out, if not drowned.

in his way. It was equal to a successful stanza whose subject was spring.

The fishes are going up the brooks as they open. They are dispersing themselves through the fields and woods, imparting new life into them. They are taking their places under the shelving banks and in the dark swamps. The water running down meets the fishes running up. They hear the latest news. Spring-aroused fishes are running up our veins too. Little fishes are seeking the sources of the brooks, seeking to disseminate their principles. Talk about a revival of religion! and business men's prayer-meetings! with which all the country goes mad now! What if it were as true and wholesome a *revival* as the little fishes feel which come out of the sluggish waters and run up the brooks toward their sources? All Nature *revives* at this season. With her it is really a *new life*, but with these churchgoers it is only a revival of religion or hypocrisy. They go downstream to still muddier waters. It cheers me more to behold the swarms of gnats which have revived in the spring sun. The fish lurks by the mouth of its native brook, watching its opportunity to dart up the stream by the cakes of ice.

Do the fishes stay to hold prayer-meetings in Fair Haven Bay, while some monstrous pike gulps them down? Or is it not rather each one privately, or with its kindred spirits, as soon as possible stemming the current of its native brook, making its way to more ethereal waters, burnishing his scaly armor by his speed, ofttimes running into osier creels and finding its salvation there even, as in the discharge of its duty?

No wonder we feel the spring influences. There is a motion in the very ground under our feet. Each rill is peopled with new life rushing up it.

If a man do not revive with nature in the spring, how shall he revive when a white-collared priest prays for him?

Small water-bugs in Clematis Brook.

We had turned in at the old Minott house. We kept on by Heron Pool and through the pitch pine wood behind Baker's, down the path to Spanish Brook, and came out on to the railroad at Walden. Channing thought it was a suitably long stretch to wind up with, like one of our old Nashoba walks, so long drawn and taxing our legs so, in which it seemed that the nearer you got to home the farther you had to go.

That is a very handsome descent by the path to Spanish Brook, seeing the path below, between the trunks of the trees. How important the hemlock amid the pines, for its darker and wilder green!

We, too, are out, obeying the same law with all nature. Not less important are the observers of the birds than the birds themselves.[1]

At last I see a small, straight flock of ducks going northeast in the distance.

In order that a house and grounds may be picturesque and interesting in the highest degree, they must suggest the idea of necessity, proving the devotion of the builder, not of luxury. We need to see the honest and naked life here and there protruding. What is a fort without any foe before it, that is not now sus-

[1] [Channing, p. 94.]

taining and never has sustained a siege? The gentleman whose purse is always full, who can meet all demands, though he employs the most famous artists, can never make a very interesting seat. He does not carve from near enough to the bone. No man is rich enough to keep a poet in his pay.

March 21. Warm rain, April-like, the first of the season, holding up from time to time, though always completely overcast.

P. M. — To Ministerial Swamp *via* Little River.

Standing by the mud-hole in the swamp, I hear the pleasant phebe note of the chickadee. It is, methinks, the most of a wilderness note of any yet. It is peculiarly interesting that this, which is one of our winter birds also, should have a note with which to welcome the spring.

Standing by that pool, it is pleasant to see the dimples made on its smooth surface by the big drops, after the rain has held up a quarter of an hour.

The skunk-cabbage at Clamshell is well out, shedding pollen. It is evident that the date of its flowering is very fluctuating, according to the condition in which the winter leaves the crust of the meadow.

This first spring rain is very agreeable. I love to hear the pattering of the drops on my umbrella, and I love also the wet scent of the umbrella. It helps take the remaining frost out and settles the ways, but there is yet frost and ice in meadows and swamps.

March 22. P. M. — Launch my boat and row downstream.

There is a strong and cool northwest wind. Leaving our boat just below N. Barrett's, we walk down the shore. We see many gulls on the very opposite side of the meadow, near the woods. They look bright-white, like snow on the dark-blue water. It is surprising how far they can be seen, how much light they reflect, and how conspicuous they are. Being strung along one every rod, they made me think of a fleet in line of battle. We go along to the pitch pine hill off Abner Buttrick's, and, finding a sheltered and sunny place, we watch the ducks from it with our glass. There are not only gulls, but about forty black ducks and as many sheldrakes, and, I think, two wood ducks. The gulls appear considerably the largest and make the most show, they are so uniformly light-colored. At a distance, as I have said, they look like snowy masses, and even nearer they have a lumpish look, like a mass of cotton, the head being light as well as the breast. They are seen sailing about in the shallow water, or standing motionless on a clod that just rises above the surface, in which position they have a particularly clumsy look; or one or two may be seen slowly wheeling about above the rest. From time to time the whole flock of gulls suddenly rises and begins circling about, and at last they settle down in some new place and order. With these were at first associated about forty black ducks, pretty close together, sometimes apparently in close single lines, some looking lumpish like decoys of wood, others standing on the bottom and reminding me of penguins. They were constantly diving with great energy, making the water fly apparently two feet upward in a thick shower. Then

away they all go, circling about for ten minutes at least before they can decide where to alight.

The black heads and white breasts, which may be golden-eyes, for they are evidently paired, male and female, for the most part,[1] — and yet I thought that I saw the red bill of the sheldrake, — these are most incessantly and skillfully plunging and from time to time apparently pursuing each other. They are much more active, whether diving or swimming about, than you expect ducks to be. Now, perchance, they are seen changing their ground, swimming off, perhaps, two by two, in pairs, very steadily and swiftly, without diving. I see two of these very far off on a bright-blue bay where the waves are running high. They are two intensely white specks, which yet you might mistake for the foaming crest of waves. Now one disappears, but soon is seen again, and then its companion is lost in like manner, having dived.

I see those peculiar spring (?) clouds, scattered cumuli with dark level bases. No doubt the season is to be detected by the aspect of the clouds no less than by that of the earth.

March 23. Surveying Mr. Gordon's farm.

See something stirring amid the dead leaves in the water at the bottom of a ditch, in two or three places, and presently see the back of a yellow-spotted turtle. Afterward a large flock of fox-colored sparrows flits by along an alder-row, uttering a faint chip like that of the tree sparrow.

[1] They are sheldrakes.

March 24. P. M. — To Fair Haven Pond, east side. The pond not yet open. A cold north-by-west wind, which must have come over much snow and ice. The chip of the ground-bird[1] resembles that of a robin, *i. e.*, its expression is the same, only fainter, and reminds me that the robin's peep, which sounds like a note of distress, is also a *chip*, or call-note to its kind.

Returning about 5 P. M. across the Depot Field, I scare up from the ground a flock of about twenty birds, which fly low, making a short circuit to another part of the field. At first they remind me of bay-wings, except that they are in a flock, show no white in tail, are, I see, a little larger, and utter a faint *sveet sveet* merely, a sort of sibilant *chip*. Starting them again, I see that they have black tails, very conspicuous when they pass near. They fly in a flock somewhat like snow buntings, occasionally one surging upward a few feet in pursuit of another, and they alight about where they first were. It [is] almost impossible to discover them on the ground, they squat so flat and so much resemble it, running amid the stubble. But at length I stand within two rods of one and get a good view of its markings with my glass. They are the *Alauda alpestris*, or shore lark,[2] quite a sizable and handsome bird; delicate pale-lemon-yellow line above the [eye], with a dark line through the eye; the yellow again on the sides of the neck and on the throat, with a black crescent below the throat; with a buff-ash breast and reddish-brown tinges; beneath, white;

[1] That is, song sparrow.

[2] Did I not see them on Nantucket?

above, rusty-brown behind, and darker, ash or slate, with purplish-brown reflections, forward; legs, black; and bill, blue-black. Common to the Old and New Worlds.

March 25. P. M. — To bank of Great Meadows by Peter's.

Cold northwest wind as yesterday and day before. Large skaters (*Hydrometra*) on a ditch.

Going across A. Clark's field behind Garfield's, I see many fox-colored sparrows flitting past in a straggling manner into the birch and pitch pine woods on the left, and hear a sweet warble there from time to time. They are busily scratching like hens amid the dry leaves of that wood (not swampy), from time to time the rearmost moving forward, one or two at a time, while a few are perched here and there on the lower branches of a birch or other tree; and I hear a very clear and sweet whistling strain, commonly half-finished, from one every two or three minutes. It is too irregular to be readily caught, but methinks begins like *ar tche tche tchear, te tche tchear*, etc., etc., but is more clear than these words would indicate. The whole flock is moving along pretty steadily.

There are so many sportsmen out that the ducks have no rest on the Great Meadows, which are not half covered with water. They sit uneasy on the water, looking about, without feeding, and I see one man endeavor to approach a flock crouchingly through the meadow for half a mile, with india-rubber boots on, where the water is often a foot deep. This has been

going on, on these meadows, ever since the town was settled, and will go on as long as ducks settle here.

You might frequently say of a poet away from home that he was as mute as a bird of passage, uttering a mere *chip* from time to time, but follow him to his true habitat, and you shall not know him, he will sing so melodiously.

March 27. P. M. — Sail to Bittern Cliff.

Scare up a flock of sheldrakes just off Fair Haven Hill, the conspicuous white ducks, sailing straight hither and thither. At first they fly low up the stream, but, having risen, come back half-way to us, then wheel and go up-stream. Soon after we scare up a flock of black ducks. We land and steal over the hill through the woods, expecting to find them under Lee's Cliff, as indeed we do, having crawled over the hill through the woods on our stomachs; and there we watched various water-fowl for an hour. There are a dozen sheldrakes (or goosanders) and among them four or five females. They are now pairing. I should say one or two pairs are made. At first we see only a male and female quite on the alert, some way out on the pond, tacking back and forth and looking every way. They keep close together, headed one way, and when one turns the other also turns quickly. The male appears to take the lead. Soon the rest appear, sailing out from the shore into sight. We hear a squeaking note, as if made by a pump, and presently see four or five great herring gulls wheeling about. Sometimes they make a sound like the scream of a hen-hawk.

They are shaped somewhat like a very thick white rolling-pin, sharpened at both ends. At length they alight near the ducks.

The sheldrakes at length acquire confidence, come close inshore and go to preening themselves, or it may be they are troubled with lice. They are all busy about it at once, continually thrusting their bills into their backs, still sailing slowly along back and forth offshore. Sometimes they are in two or three straight lines. Now they will all seem to be crossing the pond, but presently you see that they have tacked and are all heading this way again. Among them, or near by, I at length detect three or four whistlers, by their wanting the red bill, being considerably smaller and less white, having a white spot on the head, a black back, and altogether less white, and also keeping more or less apart and not diving when the rest do. Now one half the sheldrakes sail off southward and suddenly go to diving as with one consent. Seven or eight or the whole of the party will be under water and lost at once. In the meanwhile, coming up, they chase one another, scooting over the surface and making the water fly, sometimes three or four making a rush toward one.

At length I detect two little dippers, as I have called them, though I am not sure that I have ever seen the male before. They are male and female close together, the common size of what I have called the little dipper.[1] They are incessantly diving close to the button-bushes.

[1] Rice says that the little dipper has a hen bill and is not lobe-footed. He and his brother Israel also speak of another water-fowl of the river with a hen bill and some bluish feathers on the wings.

The female is apparently uniformly black, or rather dark brown, but the male has a conspicuous crest, with, apparently, white on the hindhead, a white breast, and white line on the lower side of the neck; *i. e.*, the head and breast are black and white conspicuously. Can this be the *Fuligula albeola*, and have I commonly seen only the female? Or is it a grebe?

Fair Haven Pond four fifths clear. C. saw a phœbe, *i. e.* pewee, the 25th.

The sheldrake has a peculiar long clipper look, often moving rapidly straight forward over the water. It sinks to very various depths in the water sometimes, as when apparently alarmed, showing only its head and neck and the upper part of its back, and at others, when at ease, floating buoyantly on the surface, as if it had taken in more air, showing all its white breast and the white along its sides. Sometimes it lifts itself up on the surface and flaps its wings, revealing its whole rosaceous breast and its lower parts, and looking in form like a penguin. When I first saw them fly up-stream I suspected that they had gone to Fair Haven Pond and would alight under the lee of the Cliff. So, creeping slowly down through the woods four or five rods, I was enabled to get a fair sight of them, and finally we sat exposed on the rocks within twenty-five rods. They appear not to observe a person so high above them.

It was a pretty sight to see a pair of them tacking about, always within a foot or two of each other and heading the same way, now on this short tack, now on that, the male taking the lead, sinking deep and

looking every way. When the whole twelve had come together they would soon break up again, and were continually changing their ground, though not diving, now sailing slowly this way a dozen rods, and now that, and now coming in near the shore. Then they would all go to preening themselves, thrusting their bills into their backs and keeping up such a brisk motion that you could not get a fair sight of one's head. From time to time you heard a slight titter, not of alarm, but perhaps a breeding-note, for they were evidently selecting their mates. I saw one scratch its ear or head with its foot. Then it was surprising to see how, briskly sailing off one side, they went to diving, as if they had suddenly come across a school of minnows. A whole company would disappear at once, never rising high as before. Now for nearly a minute there is not a feather to be seen, and the next minute you see a party of half a dozen there, chasing one another and making the water fly far and wide.

When returning, we saw, near the outlet of the pond, seven or eight sheldrakes standing still in a line on the edge of the ice, and others swimming close by. They evidently love to stand on the ice for a change.

I saw on the 22d a sucker which apparently had been dead a week or two at least. Therefore they must begin to die late in the winter.

March 28. P. M. — To Cliffs.

After a cloudy morning, a warm and pleasant afternoon. I hear that a few geese were seen this morning.

Israel Rice says that he heard two brown thrashers sing this morning! Is sure because he has kept the bird in a cage. I can't believe it.

I go down the railroad, turning off in the cut. I notice the hazel stigmas in the warm hollow on the right there, just beginning to peep forth. This is an unobserved but very pretty and interesting evidence of the progress of the season. I should not have noticed it if I had not carefully examined the fertile buds. It is like a crimson star first dimly detected in the twilight. The warmth of the day, in this sunny hollow above the withered sedge, has caused the stigmas to show their lips through their scaly shield. They do not project more than the thirtieth of an inch, some not the sixtieth. The staminate catkins are also considerably loosened. Just as the turtles put forth their heads, so these put forth their stigmas in the spring. How many accurate thermometers there are on every hill and in every valley! Measure the length of the hazel stigmas, and you can tell how much warmth there has been this spring. How fitly and exactly any season of the year may be described by indicating the condition of some flower!

I go by the springs toward the epigæa. It is a fine warm day with a slight haziness. It is pleasant to sit outdoors now, and, it being Sunday, neighbors walk about or stand talking in the sun, looking at and scratching the dry earth, which they are glad to see and smell again. In the sunny epigæa wood I start up two *Vanessa Antiopa*, which flutter about over the dry leaves before, and are evidently attracted toward me, settling

at last within a few feet. The same warm and placid day calls out men and butterflies.

It is surprising that men can be divided into those who lead an indoor and those who lead an outdoor life, as if birds and quadrupeds were to be divided into those that lived a within nest or burrow life and [those] that lived without their nests and holes chiefly. How many of our troubles are house-bred! He lives an outdoor life; *i. e.*, he is not squatted behind the shield of a door, he does not keep himself *tubbed*. It is such a questionable phrase as an "honest man," or the "naked eye," as if the eye which is not covered with a spy-glass should properly be called naked.

From Wheeler's plowed field on the top of Fair Haven Hill, I look toward Fair Haven Pond, now quite smooth. There is not a duck nor a gull to be seen on it. I can hardly believe that it was so alive with them yesterday. Apparently they improve this warm and pleasant day, with little or no wind, to continue their journey northward. The strong and cold northwest wind of about a week past has probably detained them. Knowing that the meadows and ponds were swarming with ducks yesterday, you go forth this particularly pleasant and still day to see them at your leisure, but find that they are all gone. No doubt there are some left, and many more will soon come with the April rains. It is a wild life that is associated with stormy and blustering weather. When the invalid comes forth on his cane, and misses improve the pleasant air to look for signs of vegetation, that wild life has withdrawn itself.

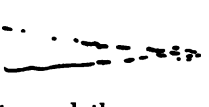
But when one kind of life goes, another comes. This

plowed land on the top of the hill — and all other fields as far as I observe — is covered with cobwebs, which every few inches are stretched from root to root or clod to clod, gleaming and waving in the sun, the light flashing along them as they wave in the wind. How much insect life and activity connected with this peculiar state of the atmosphere these imply! Yet I do not notice a spider. Small cottony films are continually settling down or blown along through the air.[1] Does not this gossamer answer to that of the fall? They must have sprung to with one consent last night or this morning and bent new cables to the clods and stubble all over this part of the world.

The little fuzzy gnats, too, are in swarms in the air, peopling that uncrowded space. They are not confined by any fence. Already the distant forest is streaked with lines of thicker and whiter haze over the successive valleys.

Walden is open. When? On the 20th it was pretty solid. C. sees a very little ice in it to-day, but probably it gets entirely free to-night. Fair Haven Pond is open.[2]

Sitting on the top of the Cliffs, I look through my glass at the smooth river and see the long forked ripple made by a musquash swimming along over the meadow. While I sit on these warm rocks, turning my glass toward the moun-



[1] A gossamer day. I see them also for a week after.

[2] This and Flint's and Walden all open together this year, the latter was so thinly frozen! (For C. says Flint's and Walden were each a third open on the 25th.)

tains, I can see the sun reflected from the rocks on Monadnock, and I know that it would be pleasant to be there too to-day as well as here. I see, too, warm and cosy seats on the rocks, where the flies are buzzing, and probably some walker is enjoying the prospect.

From this hilltop I overlook, again bare of snow, putting on a warm, hazy spring face, this seemingly concave circle of earth, in the midst of which I was born and dwell, which in the northwest and southeast has a more distant blue rim to it, as it were of more costly manufacture. On ascending the hill next his home, every man finds that he dwells in a shallow concavity whose sheltering walls are the convex surface of the earth, beyond which he cannot see. I see those familiar features, that large type, with which all my life is associated, unchanged.

Cleaning out the spring on the west side of Fair Haven Hill, I find a small frog, apparently a bullfrog, just come forth, which must have wintered in the mud there. There is very little mud, however, and the rill never runs more than four or five rods before it is soaked up, and the whole spring often dries up in the summer. It seems, then, that two or three frogs, the sole inhabitants of so small a spring, will bury themselves at its head. A few frogs will be buried at the puniest spring-head.

Coming home, I hear the croaking frogs in the pool on the south side of Hubbard's Grove. It is sufficiently warm for them at last.

Near the sand path above Potter's mud-hole I find what I should call twenty and more mud turtles'

eggs close together, which appear to have been dug from a hole close by last year. They are all broken or cracked and more or less indented and depressed, and they look remarkably like my pigeon's egg fungi, a dirty white covered thickly with a pure white roughness, which through a glass is seen to be oftenest in the form of minute but regular rosettes of a very pure white substance. If these are turtles' eggs, — and there is no stem mark of a fungus, — it is remarkable that they should thus come to resemble so closely another natural product, the fungus.

The first lark of the 23d sailed through the meadow with that peculiar prolonged chipping or twittering sound, perhaps sharp clucking.

March 29. Monday. Hear a phœbe early in the morning over the street. Considerable frost this morning, and some ice formed on the river. The white maple stamens are very apparent now on one tree, though they do not project beyond the buds.

P. M. — To Ball's Hill.

Nearly as warm and pleasant as yesterday.

I see what I suppose is the female rusty grackle; black body with green reflections and purplish-brown head and neck, but I notice no light iris. By a pool southeast of Nathan Barrett's, see five or six painted turtles in the sun, — probably some were out yesterday, — and afterward, along a ditch just east of the pine hill near the river, a great many more, as many as twenty within a rod. I must have disturbed this afternoon one hundred at least. They have crawled

out on to the grass on the sunny side of the ditches where there is a sheltering bank. I notice the scales of one all turning up on the edges. It is evident that great numbers lie buried in the mud of such ditches and mud-holes in the winter, for they have not yet been crawling over the meadows. Some have very broad yellow lines on the back; others are almost uniformly dark above. They hurry and tumble into the water at your approach, but several soon rise to the surface and just put their heads out to reconnoitre. Each trifling weed or clod is a serious impediment in their path, catching their flippers and causing them to tumble back. They never lightly skip over it. But then they have patience and perseverance, and plenty of time. The narrow edges of the ditches are almost paved in some places with their black and muddy backs. They seem to come out into the sun about the time the phœbe is heard over the water.

At the first pool I also scared up a snipe. It rises with a single *cra-a-ck* and goes off with its zigzag flight, with its bill presented to the earth, ready to charge bayonets against the inhabitants of the mud.

As I sit two thirds the way up the sunny side of the pine hill, looking over the meadows, which are now almost completely bare, the crows, by their swift flight and scolding, reveal to me some large bird of prey hovering over the river. I perceive by its markings and size that it cannot be a hen-hawk, and now it settles on the topmost branch of a white maple, bending it down. Its great armed and feathered legs dangle helplessly in the air for a moment, as if feeling for the

perch, while its body is tipping this way and that. It sits there facing me some forty or fifty rods off, pluming itself but keeping a good lookout. At this distance and in this light, it appears to have a rusty-brown head and breast and is white beneath, with rusty leg-feathers and a tail black beneath. When it flies again it is principally black varied with white, regular light spots on its tail and wings beneath, but chiefly a conspicuous white space on the forward part of the back; also some of the upper side of the tail or tail-coverts is white. It has broad, ragged, buzzard-like wings, and from the white of its back, as well as the shape and shortness of its wings and its not having a gull-like body, I think it must be an eagle. It lets itself down with its legs somewhat helplessly dangling, as if feeling for something on the bare meadow, and then gradually flies away, soaring and circling higher and higher until lost in the downy clouds. This lofty soaring is at least a grand recreation, as if it were nourishing sublime ideas. I should like to know why it soars higher and higher so, whether its thoughts are really turned to earth, for it seems to be more nobly as well as highly employed than the laborers ditching in the meadow beneath or any others of my fellow-townsmen.

Hearing a quivering note of alarm from some bird, I look up and see a male hen-harrier, the neatly built hawk, sweeping over the hill.

While I was looking at the eagle (?), I saw, on the hillside far across the meadow by Holbrook's clearing, what I at first took for a red flag or handkerchief

carried along on a pole, just above the woods. It was a fire in the woods, and I saw the top of the flashing flames above the tree-tops. The woods are in a state of tinder, and the smoker and sportsman and the burner must be careful now.

I do not see a duck on the Great Meadows to-day, as I did not up-stream yesterday. It is remarkable how suddenly and completely those that were here two days ago have left us. It is true the water has gone down still more on the meadows. I infer that waterfowl travel in pleasant weather.

With many men their fine manners are a lie all over, a skim-coat or finish of falsehood. They are not brave enough to do without this sort of armor, which they wear night and day.

The trees in swamps are streaming with gossamer at least thirty feet up, and probably were yesterday.

I see at Gourgas's hedge many tree sparrows and fox-colored sparrows. The latter are singing very loud and sweetly. Somewhat like *ar, tea, — twe'-twe, twe'-twe,* or *ar te, ter twe'-twe, twe'-twe,* variously. They are quite tame.

March 30. P. M. — To my boat at Cardinal Shore and thence to Lee's Cliff.

Another fine afternoon, warmer than before, I think.

I walk in the fields now without slumping in the thawing ground, or there are but few soft places, and the distant sand-banks look dry and warm. The frogs are now heard leaping into the ditches on your approach,

and their dimple is seen. I find a smallish bullfrog [1] under my boat.

Approaching carefully the little pool south of Hubbard's Grove, I see the dimples where the croakers which were on the surface have dived, and I see two or three still spread out on the surface, in the sun. They are very wary, and instantly dive to the bottom on your approach and bury themselves in the weeds or mud. The water is quite smooth, and it is very warm here, just under the edge of the wood, but I do not hear any croaking. Later, in a pool behind Lee's Cliff, I hear them, — the waking up of the leafy pools. The last was a pool amid the blueberry and huckleberry and a few little pines. I do not remember that I ever hear this frog in the river or ponds. They seem to be an early frog, peculiar to pools and small ponds in the woods and fields.

I notice, scampering over this water, two or three brown spiders, middling-sized. They appear to be the ones which have spun this gossamer.

There is at the bottom of this pool much of the ludwigia, that evergreen weed seen in winter at the bottom of pools and ditches. Methinks those peculiar bulbs, some of which I see near it, are of this plant.

Landing at Bittern Cliff, I went round through the woods to get sight of ducks on the pond. Creeping down through the woods, I reached the rocks, and saw fifteen or twenty sheldrakes scattered about. The full-plumaged males, conspicuously black and white and often swimming in pairs, appeared to be the most wary,

[1] [Queried in pencil.]

keeping furthest out. Others, with much less white and duller black, were very busily fishing just north the inlet of the pond, where there is about three feet of water, and others still playing and preening themselves. These ducks, whose tame representatives are so sluggish and deliberate in their motions, were full of activity. A party of these ducks fishing and playing is a very lively scene. On one side, for instance, you will see a party of eight or ten busily diving and most of the time under water, not rising high when they come up, and soon plunging again. The whole surface will be in commotion there, though no ducks may be seen. I saw one come up with a large fish, whereupon all the rest, as they successively came to the surface, gave chase to it, while it held its prey over the water in its bill, and they pursued with a great rush and clatter a dozen or more rods over the surface, making a great furrow in the water, but, there being some trees in the way, I could not see the issue. I saw seven or eight all dive together as with one consent, remaining under half a minute or more. On another side you see a party which seem to be playing and pluming themselves. They will run and dive and come up and dive again every three or four feet, occasionally one pursuing another; will flutter in the water, making it fly, or erect themselves at full length on the surface like a penguin, and flap their wings. This party make an incessant noise. Again you will see some steadily tacking this way or that in the middle of the pond, and often they rest there asleep with their heads in their backs. They readily cross the pond, swimming from this side to that.

While I am watching the ducks, a mosquito is endeavoring to sting me.

At dusk I hear two flocks of geese go over.

March 31. P. M. — To Flint's Pond.

A fresh south or southeast wind.

The most forward willow catkins are not so silvery now, more grayish, being much enlarged and the down less compact, revealing the dark scales.

Flint's, Fair Haven, and Walden Ponds broke up just about the same time, or March 28th, this year. This is very unusual. It is because on account of the mildness of the winter Walden did not become so cold as the others, or freeze so thick, and there was proportionally less thawing to be done in it.

They are burning brush nowadays. You see a great slanting column of dun smoke on the northeast of the town, which turns out to be much farther off than you suppose. It is Sam Pierce burning brush. Thus we are advertised of some man's occupation in a neighboring town. As I walk I smell the smoke of burnings, though I see none.

In the wood-paths now I see many small red butterflies, I am not sure of what species, not seeing them still. The earliest butterflies seem to be born of the dry leaves on the forest floor.

I see about a dozen black ducks on Flint's Pond, asleep with their heads in their backs and drifting across the pond before the wind. I suspect that they are nocturnal in their habits and therefore require much rest by day. So do the seasons revolve and every

chink is filled. While the waves toss this bright day, the ducks, asleep, are drifting before it across the ponds. Every now and then one or two lift their heads and look about, as if they watched by turns. I see also two ducks, perhaps a little larger than these, I am pretty sure without red bills and therefore not sheldrakes (and they are not nearly as white as sheldrakes ordinarily), with more elevated heads and gibbous (?) bills. The heads, bills, and upper parts of neck, black;[1] breast, white or whitish; but back sober-colored. Can they be brant or mallards? The leaves are now so dry and loose that it is almost impossible to approach the shore of the pond without being heard by the ducks.

I am not sure but I heard a pine warbler day before yesterday, and from what a boy asks me about a yellow bird which he saw there I think it likely. Just after sundown I see a large flock of geese in a perfect harrow cleaving their way toward the northeast, with Napoleonic tactics splitting the forces of winter.

C. says he saw a great many wood turtles on the bank of the Assabet to-day. The painted and wood turtles have seemed to be out in surprising abundance at an unusually early date this year, but I think I can account for it. The river is remarkably low, almost at summer level. I am not sure that I remember it so low at this season. Now, probably, these tortoises would always lie out in the sun at this season, if there were any bank at hand to lie on. Ordinarily at this season, the meadows being flooded, together with the pools and ditches in which the painted turtles lie, there

[1] Were they geese?

is no bank exposed near their winter quarters for them to come out on, and I first noticed them under water on the meadow. But this year it is but a step for them to the sunny bank, and the shores of the Assabet and of ditches are lined with them.

C. heard hylas to-day.

IX

APRIL, 1858

(ÆT. 40)

April 1. White-bellied swallows.

P. M. — Paddle up Assabet.

The river is at summer level; has not been up this spring, and has fallen to this. The lowermost willow at my boat is bare. The white maples are abundantly out to-day. Probably the very first bloomed on the 29th. We hold the boat beneath one, surprised to hear the resounding hum of honey-bees, which are busy about them. It reminds me of the bass and its bees. The trees are conspicuous with dense clusters of light-colored stamens. The alders above the Hemlocks do not yet shed pollen. What I called yellow wasps, which built over my window last year, have come, and are about the old nest; numbers have settled on it.[1]

I observed night before last, as often before, when geese were passing over in the twilight quite near, though the whole heavens were still light and I knew which way to look by the honking, I could not distinguish them. It takes but a little obscurity to hide a bird in the air. How difficult, even in broadest daylight, to discover again a hawk at a distance in the sky when you have once turned your eyes away!

Pleasant it is to see again the red bark of the *Cornus*

[1] Were they not the common kind looking at it?

sericea shining in the warm sun at the hill swamp, above the spring. Walking through the maple [*sic*] there, I see a squirrel's nest twenty-three or twenty-four feet high in a large maple, and, climbing to it, — for it was so peculiar, having a basketwork of twigs about it, that I did not know but it was a hawk's nest, — I found that it was a very perfect (probably) red squirrel's nest, made entirely of the now very dark or blackish green moss such as grows on the button-bush and on the swampy ground, — a dense mass of it about one foot through, matted together, — with an inobvious hole on the east side and a tuft of loose moss blowing up above it, which seemed to answer for a door or porch covering. The cavity within was quite small, but very snug and warm, where one or two squirrels might lie warmly in the severest storm, the dense moss walls being about three inches thick or more. But what was most peculiar was that this nest, though placed over the centre of the tree, where it divided into four or five branches, was regularly and elaborately hedged about and supported by a basketwork of strong twigs stretched across from bough to bough, which twigs I perceived had been gnawed green from the maple itself, the stub ends remaining visible all around.

Near by I saw another much smaller and less perfect nest of the same kind, which had fallen to the ground. This had been made in a birch, and the birch twigs had been gnawed off, but in this case I noticed a little fine broken grass within it, mixed with the moss.

I notice large water-bugs.

It is remarkable that the river seems rarely to rise

or fall gradually, but rather by fits and starts, and hence the water-lines, as indicated now by the sawdust, are very distinct parallel lines four or five or more inches apart. It is true the wind has something to do with it, and might waft to a certain place much more dust than was left on another where the water stood much longer at the same level. Surely the saw-miller's is a trade which cannot be carried on in secret. Not only this sawdust betrays him, but at night, especially, when the water is high, I hear the tearing sound of his saw a mile or more off, borne down the stream.

I see six *Sternothærus odoratus* in the river thus early. Two are fairly out sunning. One has crawled up a willow. It is evident, then, that they may be earlier in other places or towns than I had supposed, where they are not concealed by such freshets as we have. I took up and smelt of five of these, and they emitted none of their peculiar scent! It would seem, then, that this may be connected with their breeding, or at least with their period of greatest activity. They are quite sluggish now.

At Hemlock Brook, a dozen or more rods from the river, I see on the wet mud a little snapping turtle evidently hatched last year. It does not open its eyes nor mouth while I hold it. Its eyes appear as if sealed up by its long sleep. In our ability to contend with the elements what feeble infants we are to this one. Talk of great heads, look at this one! Talk of Hercules' feats in the cradle, what sort of cradle and nursing has this infant had? It totters forth confident and victorious when it can hardly carry its shield. It looked

so much like the mud or a wet muddy leaf, it was a wonder I saw it.

I start, under the hemlocks there, a butterfly (call it the tawny-orange single-white-spotted) about the size of *Vanessa Antiopa*, tawny-orange, with black spots or eyes, and pale-brown about them, a white spot near the corner of each front wing, a dark line near the edge behind, a small sharp projecting angle to the hind wings, a green-yellow back to body.[1]

See wood turtles coupled on their edges at the bottom, where the stream has turned them up.

Far up in still shallows, disturb pickerel and perch, etc. They apparently touch the muddy bottom as they dart out, muddying the water here and there.

A *Rana halecina* on the bank.

When I started to walk that suddenly pleasant afternoon, the 28th of March, I crossed the path of the two brothers R., who were walking direct to the depot as if they had special business there that Sunday, the queer short-legged dog running ahead. I talked with them an hour there in the hope that the one who is not a stranger to me would let something escape from his wise head. But he was very moderate; all I got out of him to be remembered was that in some town up-country where he lived when young, they called the woodchuck "squash-belly," — with reference to his form I suggested, but so far he had not advanced. This he communicated very seriously, as an important piece of information with which he labored. The other told me

[1] [*Vanessa j-album*, to judge by the date and the general description.]

how to raise a dog's dander, — any the gentlest dog's, — by looking sternly in his face and making a peculiar sound with your mouth. I then broke short the conference, continued my walk, while these gentlemen wheeled directly about and walked straight back again.

It is evident that the date of the first general revival of the turtles, excepting such as are generally seen in ditches, *i. e.* the yellow-spotted, depends on the state of the river, whether it is high or low in the spring.

April 2. P. M. — To yew and R. W. E.'s Cliff.

At Hubbard's Grove I see a woodchuck. He waddles to his hole and then puts out his gray nose within thirty feet to reconnoitre. It is too windy, and the surface of the croaker pool is too much ruffled, for any of the croakers to be lying out, but I notice a large mass of their spawn there well advanced. At the first little sluiceway just beyond, I catch a large *Rana halecina*, which puffs itself up considerably, as if it might be full of spawn. I must look there for its spawn. It is rather sluggish; cannot jump much yet. It allows me to stroke it and at length take it up in my hand, squatting still in it.

Who would believe that out of these dry and withered banks will come violets, lupines, etc., in profusion? At the spring on the west side of Fair Haven Hill, I startle a striped snake. It is a large one with a white stripe down the dorsal ridge between two broad black ones, and on each side the last a buff one, and then blotchy brown sides, darker toward tail; beneath,

greenish-yellow. This snake generally has a pinkish cast. There is another, evidently the same species but not half so large, with its neck lying affectionately across the first, — I may have separated them by my approach, — which, seen by itself, you might have thought a distinct species. The dorsal line in this one is bright-yellow, though not so bright as the lateral ones, and the yellow about the head; also the black is more glossy, and this snake has no pink cast. No doubt on almost every such warm bank now you will find a snake lying out. The first notice I had of them was a slight rustling in the leaves, as if made by a squirrel, though I did not see them for five minutes after. The biggest at length dropped straight down into a hole, within a foot of where he lay. They allowed me to lift their heads with a stick four or five inches without stirring, nor did they mind the flies that alighted on them, looking steadily at me without the slightest motion of head, body, or eyes, as if they were of marble; and as you looked hard at them, you continually forgot that they were real and not imaginary.

The hazel has just begun to shed pollen here, perhaps yesterday in some other places. This loosening and elongating of its catkins is a sufficiently pleasing sight, in dry and warm hollows on the hillsides. It is an unexpected evidence of life in so dry a shrub.

On the side of Fair Haven Hill I go looking for baywings, turning my glass to each sparrow on a rock or tree. At last I see one, which flies right up straight from a rock eighty [or] one hundred feet and warbles a peculiar long and pleasant strain, after the manner

of the skylark, methinks, and close by I see another, apparently a bay-wing, though I do not see its white in tail, and it utters while sitting the same subdued, rather peculiar strain.

See how those black ducks, swimming in pairs far off on the river, are disturbed by our appearance, swimming away in alarm, and now, when we advance again, they rise and fly up-stream and about, uttering regularly a *crack cr-r-rack* of alarm, even for five or ten minutes, as they circle about, long after we have lost sight of them. Now we hear it on this side, now on that.

The yew shows its bundles of anthers plainly, as if it might open in four or five days.

Just as I get home, I think I see crow blackbirds about a willow by the river.[1]

It is not important that the poet should say some particular thing, but should speak in harmony with nature. The tone and pitch of his voice is the main thing.

It appears to me that the wisest philosophers that I know are as foolish as Sancho Panza dreaming of his Island. Considering the ends they propose and the obstructions in their path, they are even. One philosopher is feeble enough alone, but observe how each multiplies his difficulties, — by how many unnecessary links he allies himself to the existing state of things. He girds himself for his enterprise with fasting and prayer, and then, instead of pressing forward like a light-armed soldier, with the fewest possible hindrances,

[1] Yes.

he at once hooks himself on to some immovable institution, as a family, the very rottenest of them all, and begins to sing and scratch gravel *towards* his objects. Why, it is as much as the strongest man can do decently to bury his friends and relations without making a new world of it. But if the philosopher is as foolish as Sancho Panza, he is also as wise, and nothing so truly makes a thing so or so as thinking it so.

Approaching the side of a wood on which were some pines, this afternoon, I heard the note of the pine warbler, calling the pines to life, though I did not see it. It has probably been here as long as I said before. Returning, I saw a sparrow-like bird flit by in an orchard, and, turning my glass upon it, was surprised by its burning yellow. This higher color in birds surprises us like an increase of warmth in the day.

April 3. Going down-town this morning, I am surprised by the rich strain of the purple finch from the elms. Three or four have arrived and lodged against the elms of our street, which runs east and west across their course, and they are now mingling their loud and rich strains with that of the tree sparrows, robins, bluebirds, etc. The hearing of this note implies some improvement in the acoustics of the air. It reminds me of that genial state of the air when the elms are in bloom. They sit still over the street and make a business of warbling. They advertise me surely of some additional warmth and serenity. How their note rings over the roofs of the village! You wonder that even the sleepers are not awakened by it to inquire who is there,

and yet probably not another than myself in all the town observes their coming, and not half a dozen ever distinguished them in their lives. And yet the very mob of the town know the hard names of Germanians or Swiss families which once sang here or elsewhere.

About 9 A. M., C. and I paddle down the river. It is a remarkably warm and pleasant day. The shore is alive with tree sparrows sweetly warbling, also blackbirds, etc. The crow blackbirds which I saw last night are hoarsely clucking from time to time. Approaching the island, we hear the air full of the hum of bees, which at first we refer to the near trees. It comes from the white maples across the North Branch, fifteen rods off. We hear it from time to time, as we paddle along all day, down to the Bedford line. There is no pause to the hum of the bees all this warm day. It is a very simple but pleasing and soothing sound, this susurrus, thus early in the spring.

When off the mouth of the Mill Brook, we hear the stertorous *tut tut tut* of frogs from the meadow, with an occasional faint bullfrog-like *er er er* intermingled. I land there to reconnoitre. The river is remarkably low, quite down to summer level, and there is but very little water anywhere on the meadows. I see some shallow lagoons (west of the brook), whence the sound comes. There, too, are countless painted turtles out, around on the banks and hummocks left by the ice. Their black and muddy backs shine afar in the sun, and though now fifteen to twenty rods off, I see through my glass that they are already alarmed, have their necks stretched out and are beginning to slip into the

water, where many heads are seen. Resolved to identify this frog, one or two of whose heads I could already see above the surface with my glass, I picked my way to the nearest pool. Close where I landed, an *R. halecina* lay out on some sedge. In went all the turtles immediately, and soon after the frogs sank to the bottom, and their note was heard only from more distant pools. I stood perfectly still, and ere long they began to reappear one by one, and spread themselves out on the surface. They were the *R. halecina*. I could see very plainly the two very prominent yellow lines along the sides of the head and the large dark ocellated marks, even under water, on the thighs, etc. Gradually they begin to recover their voices, but it is hard to say at first which one of the dozen within twenty feet is speaking. They begin to swim and hop along the surface toward each other. Their note is a hard dry *tut tut tut tut*, not at all ringing like the toad's, and produced with very little *swelling* or motion of the throat, but as much trembling of the whole body; and from time to time one makes that faint somewhat bullfrog-like *er er er*. Both these sounds, then, are made by one frog, and what I have formerly thought an early bullfrog note was this. This, I think, is the first frog sound I have heard from the river meadows or anywhere, except the croaking leaf-pool frogs and the hylodes. They are evidently breeding now like toads, and probably are about the water as exclusively as the toads will soon be.

This sound we continue to hear all day long, especially from the broad meadows in Bedford. Close at hand a single one does not sound loud, yet it is

surprising how far a hundred or thousand croaking (?) at once can be heard. It comes borne on the breeze from north over the Bedford meadows a quarter of a mile off, filling the air. It is like the rattling of a wagon along some highway, or more like a distant train on a railroad, or else of many rills emptying in, or more yet like the sound of a factory, and it comes with an echo which makes it seem yet more distant and universal. At this distance it is a soft and almost purring sound, yet with the above-named bullfrog-like variation in it. Sometimes the meadow will be almost still; then they will begin in earnest, and plainly excite one another into a general snoring or eructation over a quarter of a mile of meadow. It is unusually early to hear them so numerously, and by day, but the water, being so very low and shallow on the meadows, is unusually warm this pleasant day. This might be called the Day of the Snoring Frogs, or the Awakening of the Meadows. Probably the frost is out of the meadows very early this year. It is a remarkable spring for reptile life. It remains now to detect the note of the *palustris*, wood frog, and *fontinalis*. I am not sure but I heard one kind of bullfrog's note along the river once or twice. I saw several middle-sized frogs with green noses and dark bodies, small, bullfrog-like (??), sitting along the shore.

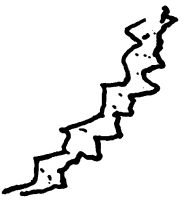
At what perhaps is called the Holt just below N. Barrett's, many grackles and red-wings together flit along the willows by our side, or a little ahead, keeping up a great chattering, while countless painted turtles are as steadily rustling and dropping into the water from the willows, etc., just ahead.

We land at Ball's Hill and eat our dinners. It is so warm we would fain bathe. We seek some shade and cannot easily find it. You wonder that all birds and insects are not out at once in such a heat. We find it delicious to take off our shoes and stockings and wade far through the shallows on the meadow to the Bedford shore, to let our legs drink air.

How pretty the white fibrous roots of the eriocaulon, floating in tufts on the meadow, like beaded chains!

In the hazy atmosphere yesterday we could hardly see Garfield's old unpainted farmhouse. It was only betrayed by its elms. This would be the right color for painters to imitate. When the sun went into a cloud we detected the outlines of the windows only.

When returning, we discovered, on the south side of the river, just at the old crossing-place from the Great Meadows, north of the ludwigia pool, a curious kind of spawn. It was white, each ovum about as big as a robin-shot or larger, with mostly a very minute white core, no black core, and these were agglutinated together in the form of zigzag hollow cylinders, two or three inches in diameter and one or two feet long, looking like a lady's ruff or other muslin work, on the bottom or on roots and twigs of willow and button-bush, where the water was two or three feet deep.



The greater part lay on the bottom, looking like a film, these cylinders being somewhat coiled about there. When you took it up, the two sides fell together, and it was flat in your hand like the leg of a stocking. In one

place there were a dozen very large red-bellied and brown-backed leeches in it, evidently battening on it. This must be frog or fish spawn. If frog-spawn, I think it must be that of the *Rana halecina*,[1] the only ones fairly awake along the river; but how are leeches propagated? There was a great abundance of it, many bushels, for at least a dozen rods along the shore, and it must afford food to many creatures. The consistency of a jelly we eat. We saw one perch there. Some on the ruts was quite up to the surface, but most lower. When you had taken up a handful and broken it, on dropping it into the water it recovered its form for the most part. I noticed that the fine willow root-fibres and weeds, potamogeton, etc., there were thickly covered with a whitish film or fuzz, an eighth to a quarter of an inch deep, or long, apparently connected with this spawn, which made them look like plants covered with frost in a winter morning, though it was a duller white; but out of water you did not perceive anything. Probably this was the milt.

When I have been out thus the whole day and spend the whole afternoon returning, it seems to me pitiful and ineffectual to be out as usual only in the afternoon, — as if you had come late to a feast, after your betters had done. The afternoon seems coarse and reversed, or at best a long twilight, after the fresh and bright forenoon.

The gregariousness of men is their most contemptible and discouraging aspect. See how they follow each other like sheep, not knowing why. Day & Martin's

[1] No. *Vide* April 5th. Is it not fish-spawn?

blacking was preferred by the last generation, and also is by this. They have not so good a reason for preferring this or that religion as in this case even. Apparently in ancient times several parties were nearly equally matched. They appointed a committee and made a compromise, agreeing to vote or believe so and so, and they still helplessly abide by that. Men are the inveterate foes of all improvement. Generally speaking, they think more of their hen-houses than of any desirable heaven. If you aspire to anything better than politics, expect no coöperation from men. They will not further anything good. You must prevail of your own force, as a plant springs and grows by its own vitality.

Hear the *Rana halecina* in the evening also, from my window.

April 4. P. M. — Go to the cold pond-hole south of J. P. Brown's, to hear the croaking frogs. They are in full blast on the southwest side, where there have been some birches, etc., cut the past winter, and there is much brush fallen in the water, whose shelter they evidently like, and there they have dropped their spawn on the twigs. I stand for nearly an hour within ten feet on the bank overlooking them. You see them lying spread out, or swimming toward one another, sometimes getting on to the brush above the water, or hopping on to the shore a few feet. I see one or two pairs coupled, now sinking, now rising to the surface. The upper one, a male, quite dark brown and considerably smaller than the female, which is reddish —

such part of her as I can see — and has quite distinct dark bars on its posterior extremities, while I cannot discern any on the male. But the greatest commotion comes from a mass of them, five or six inches in diameter, where there are at least a dozen or fifteen clinging to one another and making a queer croaking. From time to time a newcomer adds himself to the mass, turning them over and over.[1] The water is all alive with them for a couple of rods, and from time to time they croak much more generally than at others, evidently exciting one another to it, as do the *R. halecina*. Before I caught any of them I was only struck with the fact that the males were much smaller and very much darker, though I could see only one female partially. At length, when all the rest had been scared to the bottom by nearer approach, I got near to the struggling mass. They were continually dropping off from it, and when at length I reached out to seize it, there were left but two. Lifting the female, the male still clung to her with his arms about her body, and I caught them both, and they were perfectly passive while I carried them off in my hand. To my surprise the female was the ordinary light-reddish-brown *wood frog* (*R. sylvatica*), with legs distinctly barred with dark, while the male, whose note alone I have heard, methinks, was not only much smaller, but of a totally different color, a dark brown above with dark-slate-colored sides, and the yet darker bars on its posterior extremities and the dark line from its snout only to be

[1] It was an incessantly struggling mass. You could have *taken up a dozen* or fifteen in your two hands.

distinguished [on] a close inspection. Throat and beneath, a cream white, like but clearer than the female. In color, a small bullfrog [1] which I had caught, and any other frog that I know, was more like the female than these males were. I have caught the female in previous years, as last spring in New Bedford, but could find no description of him and suspected it to be an undescribed frog. It seems they were all (of this mass) about one female, and I saw only one other in the pool, but apparently only one had possession of her. There was a good deal of spawn firmly attached to the brush close to the surface, and, as usual, in some lights you could not see the jelly, only the core. I brought these frogs home and put them in a pan of water.[2]

Sophia has brought home the early large-catkinned willow, well out; probably some yesterday at least.

April 5. What I call the young bullfrog, about two and a half inches long, — though it has no yellow on throat. It has a bright-golden ring outside of the iris as far as I can see round it. Is this the case with the bullfrog? May it not be a young *Rana fontinalis?* No yellow to throat. I found it on the shore of the Clamshell Hill ditch. Can jump much better than the others, and easily gets out of the deep pan.[3]

Those to whom I showed the two *R. sylvatica* could not believe that they were one species, but this morn-

[1] Probably *R. fontinalis.*

[2] *Vide* below.

[3] *Vide* three pages forward. *Vide* also June 8, 1858. Probably a *Rana fontinalis.*

ing, on taking them out of the water to examine minutely, they changed so rapidly, chameleon-like, that I could only describe their first appearance from memory. The male grew a lighter brown and the female darker, till in ten minutes there was but a slight shade of difference, and their whole aspect, but especially that of the male, *seemed* altered also, so that it was not easy to distinguish them. Yet they would readily be recognized for rather dark-colored wood frogs, the posterior extremities of both having distinct dark bars. The female was two and one tenth inches long, the male one and four fifths inches long. The female was (apparently involuntarily) dropping a little spawn in the pan this morning, and the black core was as big as the head of a pin when it issued from the body. The only difference in color that I now noticed, except that the male was a shade the darkest (both a pale brown), was that there was a very distinct dark mark on the front side at the base of the anterior extremities of the female, while there was but the slightest trace of it in the male. Also the female was more green on the flanks and abdomen; also she had some dusky spots beneath. What is described as a yellow line along the lower edge of the dark one through the eyes, *i. e.* along the upper jaw, and which I observed to be such last spring, was in both these at all times a broad silvery or bright cream-colored line. Putting them into the water, after an hour they again acquired distinct colors, but not quite so distinct at first. It is singular that at the breeding-season, at least, though both are immersed in water, they are of a totally different color, —

the male a very dark brown for a frog, darker than the ordinary color of any Massachusetts frog, without distinct bars to his posterior extremities or a distinct dark line along the snout, while the female is a light reddish brown or lively dead-leaf color, — and that, taken out of water, they rapidly approximate each other till there is only a shade of difference if any. At their breeding-season, then, the colors of the male are not livelier, as in the case of birds, but darker and more sombre.

Considering how few of these or of the *R. halecina* you meet with in the summer, it is surprising how many are now collected in the pools and meadows. The woods resound with the one, and the meadows day and night with the other, so that it amounts to a general awakening of the pools and meadows.

I hear this morning the seringo sparrow.

In the proceedings of the Natural History Society for December, 1856, there were presented by Dr. H. R. Storer, "a globular concretion of grass said to have been formed by the action of waves upon the seashore." Were not these some obtained by the Hoars or Emersons from Flint's Pond?

P. M. — I go to the meadow at the mouth of the Mill Brook to find the spawn of the *R. halecina*. They are croaking and coupling there by thousands, as before, though there is a raw east wind to-day. I see them coupled merely, in a few instances, but no such balls or masses of them about one female as in the case of the *R. sylvatica*, though this may occur. You can easily

get close to them and catch them by wading. The first lagoon within the meadow was not a foot deep anywhere, and I found the spawn where it was about eight inches deep, with a grassy and mossy bottom. It was principally in two collections, which were near together and each about a yard in diameter. The separate masses of this were from two to six, or commonly three or four, inches in diameter, and generally looked quite black and dense or fine-egged in the water. But it really on a closer inspection presented quite an interesting variety of appearances. The black core is about the size of a pin-head, and one half of it is white. It commonly lies with the black side up, and when you look directly down on it, has a rich, very dark blue-purple appearance. When with the white or wrong side up, it looks like a mass of small silvery points or bubbles, and you do not notice the jelly. But it lies also at all intermediate angles, and so presents a variety of appearances. It is attached pretty firmly to the grass and rises just to the surface. There are very fine froth-like bubbles more or less mingled with it. I am not sure that I can distinguish it from that of the *R. sylvatica*.

I caught several of the first. The dark blotches on the back were generally more or less roundish with a crenate edge. There were distinct, raised, light bronze-colored ridges from the snout along the side-head and body, which were conspicuous at a distance. They were, all that I caught, distinctly *yellow*-white beneath, and some had green buttocks.[1] And now, standing over them, I saw that there were considerable *lateral*

[1] Were they not males?

bubbles formed when they croaked, *i. e.*, the throat was puffed out *on each side* quite far behind the snout. The tympanum was very convex and prominent.

At evening I find that the male *R. sylvatica* couples with or fastens himself to the back of the young bullfrog (?), or whatever it is,[1] and the latter meanwhile *croaks*, in short croaks four or five times repeated, much like the *R. sylvatica*, methinks.

I hear the hylodes peeping now at evening, being at home, though I have not chanced to hear any during the day. They prefer the evening.

April 6. A moist, foggy, and very slightly drizzly morning. It has been pretty foggy for several mornings. This makes the banks look suddenly greener, apparently making the green blades more prominent and more vividly green than before, prevailing over the withered ones.

P. M. — Ride to Lee's Cliff and to Second Division Brook.

It begins to grow cold about noon, after a week or more of generally warm and pleasant weather. They with whom I talk do not remember when the river was so low at this season. The top of the bathing-rock, above the island in the Main Branch, was more than a foot out of water on the 3d, and the river has been falling since. On examining the buds of the elm at Helianthus Bank, I find it is not the slippery elm, and therefore I know but one.

At Lee's Cliff I find no saxifrage in bloom above

[1] *R. fontinalis.*

the rock, on account of the ground having been so exposed the past exceedingly mild winter, and no *Ranunculus fascicularis* anywhere there, but on a few small warm shelves under the rocks the saxifrage makes already a pretty white edging along the edge of the grass sod [?] on the rocks; has got up three or four inches, and may have been out four or five days. I also notice one columbine, which may bloom in a week if it is pleasant weather.

The *Ulmus Americana* is apparently just out here, or possibly yesterday. The *U. fulva* not yet, of course. The large rusty blossom-buds of the last have been extensively eaten and mutilated, probably by birds, leaving on the branches which I examine mostly mere shells.

I see, in [one] or two places in low ground, elder started half an inch, before any other shrub or tree. The *Turritis stricta* is four to six inches high. No mouse-ear there yet.

I hear hylas in full blast 2.30 P. M.

It is remarkable how much herbaceous and shrubby plants, some which are decidedly evergreen, have suffered the past very mild but open winter on account of the ground being bare. Accordingly the saxifrage and crowfoot are so backward, notwithstanding the warmth of the last ten days. Perhaps they want more moisture, too. The asplenium ferns of both species are very generally perfectly withered and shrivelled, and in exposed places on hills the checkerberry has not proved an evergreen, but is completely withered and a dead-leaf color. I do not remember when it has suffered so much.

Such plants require to be covered with snow to protect them.

At Second Division, the *Caltha palustris*, half a dozen well out. The earliest may have been a day or two.

The frost is but just coming out in cold wood-paths on the north sides of hills, which makes it very muddy, there only.

Returned by the Dugan Desert and stopped at the mill there to get the aspen flowers. The very earliest aspens, such as grow in warm exposures on the south sides of hills or woods, have begun to be effete. Others are not yet out.

Talked a moment with two little Irish (?) boys, eight or ten years old, that were playing in the brook by the mill. Saw one catch a minnow. I asked him if he used a hook. He said no, it was a "dully-chunk," or some such word. "*Dully* what?" [I] asked. "Yes, *dully*," said he, and he would not venture to repeat the whole word again. It was a small horsehair slip-noose at the end of a willow stick four feet long. The horsehair was twisted two or three together. He passed this over the fish slowly and then jerked him out, the noose slipping and holding him. It seems they are sometimes made with wire to catch trout. I asked him to let me see the fish he had caught. It was a little pickerel five inches long, and appeared to me strange, being *transversely* barred, and reminded me of the Wrentham pond pickerel; but I could not remember surely whether this was the rule or the exception; but when I got home I found that this was the

half of it, — the rest mainly sphagnum, — of the dead and fallen stems of water andromeda which have accumulated in course of time.

I brought home the above two kinds of spawn in a pail. Putting some of the *Rana halecina* spawn in a tumbler of water, I cannot see the gelatinous part, but only the dark or white cores, which are kept asunder by it at regular intervals.

The other (probably fish) spawn is seen to be arranged in perfect hexagons; *i. e.*, the ova so impinge on each other; but where there is a vent or free side, it is a regular arc of a circle. Is not this the form that spheres pressing on each other equally on all sides assume? I see the embryo, already fish-like (?), curved round the yolk, with a microscope.[1]

April 8. Surveying Kettell farm.

Could I have heard *Fringilla socialis* along the street this morning?[2] Or may it have been the *hyemalis?*

Polly Houghton comes along and says, half believing it, of my compass, "This is what regulates the moon and stars."

April 9. April rain at last, but not much; clears up at night.

At 4.30 P. M. to Well Meadow Field.

[1] The greater part of the fish-spawn, being left out in a firkin, was apparently killed by the cold, the water freezing half an inch thick April 7th.

[2] Possibly, for I hear it the 14th, and perhaps the 12th. *Vide* 12th.

The yew looks as if it would bloom in a day or two, and the staminate *Salix humilis* in the path in three or four days.[1] Possibly it is already out elsewhere, if, perchance, that was not it just beginning on the 6th on the Marlborough road. The pistillate appear more forward. It must follow pretty close to the earliest willows.

I hear the booming of snipe this evening, and Sophia says she heard them on the 6th. The meadows having been bare so long, they may have begun yet earlier. Persons walking up or down our village street in still evenings at this season hear this singular *winnowing* sound in the sky over the meadows and know not what it is. This "booming" of the snipe is our regular village serenade. I heard it this evening for the first time, as I sat in the house, through the window. Yet common and annual and remarkable as it is, not one in a hundred of the villagers hears it, and hardly so many know what it is. Yet the majority know of the Germanians who have only been here once. Mr. Hoar was almost the only inhabitant of this street whom I had heard speak of this note, which he used annually to hear and listen for in his sundown or evening walks.

R. Rice tells me that he has seen the pickerel-spawn hung about in strings on the brush, especially where a tree had fallen in. He thinks it was the pickerel's because he has seen them about at the time. This seems to correspond with mine of April 3d, though he did [not] recognize the peculiar form of it.

I doubt if men do ever simply and naturally glorify

[1] *Vide* 13th.

God in the ordinary sense, but it is remarkable how sincerely in all ages they glorify nature. The praising of Aurora, for instance, under some form in all ages is obedience to as irresistible an instinct as that which impels the frogs to peep.

April 11. P. M. — To Lee's Cliff.

The black spheres (rather dark brown) in the *Rana sylvatica* spawn by Hubbard's Grove have now opened and flatted out into a rude broad pollywog form. (This was an early specimen.)

Yesterday saw moles working in a meadow, throwing up heaps.

I notice at the Conantum house, of which only the chimney and frame now stand, a triangular mass of rubbish, more than half a bushel, resting on the great mantel-tree against an angle in the chimney. It being mixed with clay, I at first thought it a mass of clay and straw mortar, to fill up with, but, looking further, I found it composed of corn-cobs, etc., and the excrement probably of rats, of this form and size, and of pure clay, looking like the cells of an insect. Either the wharf rat or this country rat. They had anciently chosen this warm place for their nest and carried a great store of eatables thither, and the clay of the chimney, washing down, had incrusted the whole mass over. So this was an old rats' nest as well as human nest, and so it is with every old house. The rats' nest may have been a hundred and fifty years old. Wherever you see an old house, there look for an old rats' nest. In hard times they had, ap-

parently, been compelled to eat the clay, or it may be that they love it. It is a wonder they had not set the house on fire with their nest. Conant says this house was built by Rufus Hosmer's great-grandfather.

Slippery elm. Crowfoot (*Ranunculus fascicularis*) at Lee's *since* the 6th, apparently a day or two before this. Mouse-ear, not yet. What that large frog, bullfrog-like but with brown spots on a dirty-white throat, in a pool on Conantum? See thimble-berry and rose bush leafing under the rocks.

April 12. A. M. — Surveying part of William P. Brown's wood-lot in Acton, west of factory.

Hear the huckleberry-bird and, I think, the *Fringilla socialis*.[1] The handsomest pails at the factory are of oak, white and some "gray" (perhaps scarlet), but these are chiefly for stables. The woods are all alive with pine warblers now. Their note is the music to which I survey. Now the early willows are in their prime, methinks. At angle H of the lot, on a hillside, I find the mayflower, but not in bloom. It appears to be common thereabouts.

Returning on the railroad, the noon train down passed us opposite the old maid Hosmer's house. In the woods just this side, we came upon a partridge standing on the track, between the rails over which the cars had just passed. She had evidently been run down, but, though a few small feathers were scattered along for a dozen rods beyond her, and she looked a little ruffled, she was apparently more disturbed in mind than body.

[1] Probably, for I hear it the 14th.

I took her up and carried her one side to a safer place. At first she made no resistance, but at length fluttered out of my hands and ran two or three feet. I had to take her up again and carry and drive her further off, and left her standing with head erect as at first, as if beside herself. She was not lame, and I suspect no wing was broken. I did not suspect that this swift wild bird was ever run down by the cars. We have an account in the newspapers of every cow and calf that is run over, but not of the various wild creatures who meet with that accident. It may be many generations before the partridges learn to give the cars a sufficiently wide berth.

April 13. Began to rain last evening, and still rains. The tree sparrows sing sweetly, canary-like, still. Hear the first toad in the rather cool rain, 10 A. M.

See through the dark rain the first flash of lightning, in the west horizon, doubting if it was not a flash of my eye at first, but after a very long interval I hear the low rumbling of the first thunder, and now the summer is baptized and inaugurated in due form. Is not the first lightning the forerunner or warranty of summer heat? The air now contains such an amount of heat that it emits a flash.

Speaking to J. B. Moore about the partridges being run down, he says that he was told by Lexington people some years ago that they found a duck lying dead under the spire of their old meeting-house (since burned) which stood on the Battle-Ground. The weathercock — and it was a cock in this case — was

considerably bent, and the inference was that the duck had flown against it in the night.

P. M. — To the yew.

Shepherd's-purse already going to seed; in bloom there some time. Also chickweed; how long? I had thought these would be later, on account of the ground having been so bare, and indeed they did suffer much, but early warm weather forwarded them. That unquestionable staminate *Salix humilis* beyond yew will not be out for three or four days. Its old leaves on the ground are turned cinder-color, as are those under larger and doubtful forms. Epigæa abundantly out, *maybe* four or five days. It was apparently in its winter state March 28th.

April 14. Rains still, with one or two flashes of lightning, but soon over.

The yew plucked yesterday blossoms in house today.

P. M. — Up Assabet.

The river is a little higher on account of rain. I see much sweet flag six or eight inches long, floating, it having been cut up apparently by musquash. (The 17th I see much of the sparganium cut up close to the bottom along a musquash-path at the bottom of a meadow where there was one foot of water.)

My *Rana halecina* spawn in tumbler is now flatted out and begins to betray the pollywog form. I had already noticed a little motion in it from time to time, but nothing like the incessant activity of the embryo fishes.

I find no suckers' [1] nests yet. There has been no rise of the river of any consequence.

At Ed. Hoar's in the evening. I look at one of his slides through a microscope, at the infusorial skeletons of the navicula and dumb-bell infusoria, etc., etc. With his microscope I see the heart beating in the embryo fish and the circulations distinctly along the body.

April 15. P. M. — To sedge-path *Salix humilis*.

I see many planting now.

See a pair of woodpeckers on a rail and on the ground a-courting. One keeps hopping near the other, and the latter hops away a few feet, and so they accompany one another a long distance, uttering sometimes a faint or short *a-week*.

I go to find hylodes spawn. I hear some now peeping at mid-afternoon in Potter's meadow, just north of his swamp. It is hard to tell how far off they are. At a distance they often appear to be nearer than they are; when I get nearer I think them further off than they are; and not till I get their parallax with my eyes by going to one side do I discover their locality. From time to time one utters that peculiar quavering sound, I suspect of alarm, like that which a hen makes when she sees a hawk. They peep but thinly at this hour of a bright day. Wading about in the meadow there, barelegged, I find the water from time to time, though no deeper than before, exceedingly cold,

[1] [A pencilled interrogation-point in parentheses here.]

evidently because there is ice in the meadow there still.

Having stood quite still on the edge of the ditch close to the north edge of the maple swamp some time, and heard a slight rustling near me from time to time, I looked round and saw a mink under the bushes within a few feet. It was pure reddish-brown above, with a blackish and somewhat bushy tail, a blunt nose, and somewhat innocent-looking head. It crept along toward me and around me, *within two feet*, in a semicircle, snuffing the air, and pausing to look at me several times. Part of its course when nearest me was in the water of the ditch. It then crawled slowly away, and I saw by the ripple where it had taken to the ditch again. Perhaps it was after a frog, like myself. It may have been attracted by the peeping. But how much blacker was the creature I saw April 28th, 1857! A very different color, though the tail the same form.

The naturalist accomplishes a great deal by patience, more perhaps than by activity. He must take his position, and then wait and watch. It is equally true of quadrupeds and reptiles. Sit still in the midst of their haunts.

Saw flitting silently through the wood, near the yew, two or three thrushes, much like, at least, the *Turdus Wilsonii;* a light ring about eyes, and whitish side of throat (?); rather fox-colored or cinnamon tail, with ashy reflections from edges of primaries; flesh-colored legs. Did not see the breast. Could it have been what I have called *T. solitarius?* Soon after *methought* I heard one faint wood thrush note (??).[1]

[1] *Vide* 21st.

Catch a peeper at Hayden's Pool. I suspect it may have been a female, for, though I kept it a day at home, it did not peep. It was a pale fawn-color out of water, nine tenths of an inch long, marked with dusky like this, though not so distinctly. It could easily climb up the side of a tumbler, and jumped eighteen inches at once.

Equisetum arvense out by railroad, and probably I saw it out on the 12th, near the factory.

April 16. My fish ova in a tumbler has [*sic*] gradually expanded till it is some three sixteenths of an inch in diameter, and for more than a week the embryos have been conspicuously active, hardly still enough to be observed with a microscope. Their tails, eyes, pectoral fins, etc., were early developed and conspicuous. They keep up a regular jerking motion as they lie curved in the egg, and so develop themselves. This morning I set them in the sun, and, looking again soon after, found that they were suddenly hatched, and more than half of them were free of the egg. They were nearly a quarter of an inch long, or longer than the diameter of a perfect egg. The substance of the egg-shell seemed to have expanded and softened, and the embryo by its incessant quirking elongated it so that it was able to extend itself at full length. It then almost incessantly kept up a vibratory motion of its tail and its pectoral fins, and every few moments it bunted against the side of the egg, wearing it away and extending it, till it broke through. Sometimes it got its head

out first and then struggled many minutes before it escaped completely. It was a pretty sight to see them all rising immediately to the surface by means of the tail and pectoral fins, the first vibrating from one twentieth to one thirtieth of an inch, at an angle of about forty-five degrees, and then, ceasing their motions, they steadily settled down again. Think of the myriads of these minnows set free of a warm morning, and rising and falling in this wise in their native element!! (Some are still in the egg on the 18th.)

The incessant activity of these minnows, and apparent vigor, are surprising. Already they dart swiftly an inch one side like little pickerel, tender as they are, carrying the yolk with them, which gradually diminishes, as I notice, in a day or two after. They have no snouts yet, or only blunt and rounded ones. I have not detected any general resting even at night, though they often rest on the bottom day or night. They are remarkably aroused when placed in the morning sun. This sets them all in motion. Looking at them through a jar between you and the sun, a hundred at once, they reflect the colors of the rainbow, — some purple, others violet, green, etc., etc. It is a wonder how they survive the accidents of their condition. By what instinct do they keep together in a school?

I think that the spawn could not have been laid long when I found it April 3d, it was so perfect and the embryo so slightly, if at all, developed. That was a sudden very warm day. In that case, they may be hatched in a fortnight. That appeared to have been a general breeding-place for this species of fish. I

looked a good while on the 14th, but could find none near home.

My hylodes in the tumbler will always hop to the side toward the window as fast as I turn it.

We may think these days of the myriads of fishes just hatched which come rising to the surface. The water swarms with them as with the mosquito.

P. M. — To Conantum.

The *Rana sylvatica* spawn at Hubbard's Grove begins to kick free. This is early. I put some in a bottle, which being shaken in my walk, I find the embryos all separated from the ova when I get home. These are now regular little pollywogs and wiggle about in a lively manner when the water is shaken. They are chiefly tail and head. They look like the samara of the ash, and in both cases this winged or feather-like tail it is that transports them. I can already see their little feet or fins.

The bodkin-like bulb, considerably grown, in my tumbler and elsewhere, is probably the water-purslane. I see it floating free and sending out many rootlets, on pools and ditches. In this way it spreads itself.

The earliest red maple I can see in this walk is well out, on the Hubbard Bridge causeway. Probably some was yesterday.

I sat a long time by the little pool behind Lee's, to see the hylodes. Not one was heard there; only the skater insects were slightly rippling the surface, pursuing one another and breeding amid the grass. The bottom is covered with pretty proserpinaca. At length

I see one hylodes with heels up, burying itself at the bottom. How wary they are! After nearly half an hour I see one sitting out on a blade of the floating purple grass, but down he goes again. They see or hear you three or four rods off. They are more active toward night.

April 17. P. M. — *Via* Assabet to Coral Rock.

See several kingfishers. Red-wings still in flocks, and crow blackbirds feeding amid leaves by Assabet-side, half a dozen together. The female flowers of the alder are now very pretty when seen against the sun, bright-crimson. I take up a wood turtle on the shore, whose sternum is covered with small ants. The sedge is shooting up in the meadows, erect, rigid, and sharp, a glaucous green unlike that of the grass on banks. The linnæa-like plant turns out to be golden saxifrage. Its leaf is the same form, but smooth and not shrubby.

The *Rana halecina* spawn in tumbler begins to struggle free of the ova, but it is not so much developed as the *R. sylvatica*. Some of the first may be a little more forward in the meadows. I see some to-day, probably this kind, flatted out, though I do not see the frog. It made the same sound, however. The *R. sylvatica* is probably generally the earliest.

April 18. P. M. — To Hubbard's Grove.

A dandelion open; will shed pollen to-morrow.

The *Rana sylvatica* tadpoles have mostly wiggled away from the ova. Put some *R. halecina* spawn which has flatted out in a ditch on Hubbard's land. I saw in those ditches many small pickerel, landlocked, which

appeared to be transversely barred! They bury themselves in the mud at my approach.

Examined the pools and ditches in that neighborhood, *i. e.* of Skull-Cap Ditch, for frogs. All that I saw distinctly, except two *R. fontinalis*, were what I have considered young bullfrogs, middling-sized frogs with a greenish-brown back and a throat commonly white or whitish. I saw in a deep and cold pool some spawn placed just like that of the *R. sylvatica* and the *R. halecina*, — it was in the open field, — and the only frog I could distinguish near it was a middling-sized one, or larger, with a yellow throat, not distinctly green, but brown or greenish-brown above, but green along each upper jaw. A small portion of bright-golden ring about the eye was to be seen in front.

In the spring near by, I see two unquestionable *R. fontinalis*, one much the largest and with brighter mottlings, probably on account of the season. The upper and forward part of their bodies distinct green, but their throats, white or whitish, not yellow. There were also two small and dark-colored frogs, yet with a little green tinge about the snouts, in the same spring.

I suspect that all these frogs may be the *R. fontinalis*, and none of them bullfrogs. Certainly those two unquestionable *R. fontinalis* had no yellow to throats, and probably they vary very much in the greenness of the back. Those two were not so much barred on the legs as mottled, and in one the mottlings had quite bright halos. They had the yellow segment in front part of eye, as also had the two smallest. Have the bullfrogs this? I doubt if I have seen a bullfrog yet.

I should say, with regard to that spawn, that I heard in the neighboring pool the stertorous *tut tut tut* like the *R. halecina*, and also one dump sound.

Frogs are strange creatures. One would describe them as peculiarly wary and timid, another as equally bold and imperturbable. All that is required in studying them is patience. You will sometimes walk a long way along a ditch and hear twenty or more leap in one after another before you, and see where they rippled the water, without getting sight of one of them. Sometimes, as this afternoon the two *R. fontinalis*, when you approach a pool or spring a frog hops in and buries itself at the bottom. You sit down on the brink and wait patiently for his reappearance. After a quarter of an hour or more he is sure to rise to the surface and put out his nose quietly without making a ripple, eying you steadily. At length he becomes as curious about you as you can be about him. He suddenly hops straight toward [you], pausing within a foot, and takes a near and leisurely view of you. Perchance you may now scratch its nose with your finger and examine it to your heart's content, for it is become as imperturbable as it was shy before. You conquer them by superior patience and immovableness; not by quickness, but by slowness; not by heat, but by coldness. You see only a pair of heels disappearing in the weedy bottom, and, saving a few insects, the pool becomes as smooth as a mirror and apparently as uninhabited. At length, after half an hour, you detect a frog's snout and a pair of eyes above the green slime, turned toward you, — etc.

It is evident that the frog spawn is not accidentally

placed, simply adhering to the stubble that may be nearest, but the frog chooses a convenient place to deposit it; for in the above-named pool there was no stout stubble rising above the surface except at one side, and there the spawn was placed.

It is remarkable how much the musquash cuts up the weeds at the bottom of pools and ditches, — bur-reed, sweet flags, pontederia, yellow lily, fine, grass-like rushes, and now you see it floating on the surface, sometimes apparently where it has merely burrowed along the bottom.

I see where a ditch was cut a few years ago in a winding course, and now a young hedge of alders is springing up from the bottom on one side, winding with the ditch. The seed has evidently been caught in it, as in a trap.

April 19. Spend the day hunting for my boat, which was stolen. As I go up the riverside, I see a male marsh hawk hunting. He skims along exactly over the edge of the water, on the meadowy side, not more than three or four feet from the ground and winding with the shore, looking for frogs, for in such a tortuous line do the frogs sit. They probably know about what time to expect his visits, being regularly decimated. Particular hawks farm particular meadows. It must be easy for him to get a breakfast. Far as I can see with a glass, he is still tilting this way and that over the water-line.

At Fair Haven Pond I see, half a mile off, eight large water-fowl, which I thought at first were large ducks, though their necks appeared long. Studying them

patiently with a glass, I found that they had gray backs, black heads and necks with perhaps green reflections, white breasts, dark tips to tails, and a white spot about eyes on each side of bill. At first the whole bird had looked much darker, like black ducks. I did not know but they might be brant or some very large ducks, but at length inclined to the opinion that they were geese. At 5.30, being on the Common, I saw a small flock of geese going over northeast. Being reminded of the birds of the morning and their number, I looked again and found that there were eight of them, and probably they were the same I had seen.

Viola ovata on bank above Lee's Cliff. Edith Emerson found them there yesterday; also columbines and the early potentilla April 13th!!!

I hear the pine warblers there, and also what I thought a variation of its note, quite different, yet I thought not unfamiliar to me. Afterwards, along the wall under the Middle Conantum Cliff, I saw many goldfinches, male and female, the males singing in a very sprightly and varied manner, sitting still on bare trees. Also uttered their watery twitter and their peculiar mewing. In the meanwhile I heard a faint thrasher's note, as if faintly but perfectly imitated by some bird twenty or thirty rods off. This surprised me very much. It was equally rich and varied, and yet I did not believe it to be a thrasher. Determined to find out the singer, I sat still with my glass in hand, and at length detected the singer, a goldfinch sitting within gunshot all the while. This was the most varied and sprightly performer of any bird I have heard this

year, and it is strange that I never heard the strain before. It may be this note which is taken for the thrasher's before the latter comes.

P. M. — Down river.

I find that my *Rana halecina* spawn in the house is considerably further advanced than that left in the meadows. The latter is not only deeper beneath the surface now, on account of the rain, but has gathered dirt from the water, so that the jelly itself is now plainly seen; and some of it has been killed, probably by frost, being exposed at the surface. I hear the same *tut tut tut*, probably of the *halecina*, still there, though not so generally as before.

See two or three yellow lilies nearly open, showing most of their yellow, beneath the water; say in two or three days.

Rice tells me of winging a sheldrake once just below Fair Haven Pond, and pursuing it in a boat as it swam down the stream, till it went ashore at Hubbard's Wood and crawled into a woodchuck's hole about a rod from the water on a wooded bank. He could see its tail and pulled it out. He tells of seeing cartloads of lamprey eels in the spawning season clinging to the stones at a dam in Saco, and that if you spat on a stone and cast it into the swift water above them they would directly let go and wiggle down the stream and you could hear their tails snap like whips on the surface, as if the spittle was poison to them; but if you did not spit on the stone, they would not let go. He thinks that a flock of geese will sometimes stop for a wounded one to get well.

Hear of bluets found on Saturday, the 17th; how long?

Hear a toad ring at 9 P. M. Perhaps I first hear them at night, though cooler, because it is still. R. W. E. saw an anemone on the 18th.

April 20. P. M. — Rain-storm begins, with hail.

April 21. George Melvin says that Joshua Haynes once saw a perch depositing her spawn and the male following behind and devouring it! (?) Garlick in his book on pisciculture says that the perch spawn in May. Melvin says that those short-nosed brook pickerel are caught in the river also, but rarely weigh more than two pounds.

The puddles have dried off along the road and left thick deposits or water-lines of the dark-purple anthers of the elm, coloring the ground like sawdust. You could collect great quantities of them.

The arbor-vitæ is apparently effete already. Ed. Hoar says he heard a wood thrush the 18th.

P. M. — To Easterbrooks's and Bateman's Pond.

The benzoin yesterday and possibly the 19th, so much being killed. It might otherwise have been earlier yet. *Populus grandidentata* some days at least. The *Cornus florida* flower-buds are killed.

The rocks on the east side of Bateman's Pond are a very good place for ferns. I see some very large leather-apron umbilicaria there. They are flaccid and unrolled now, showing most of the olivaceous-fuscous upper side. This side feels cold and damp, while the other,

the black, is dry and warm, notwithstanding the warm air. This side, evidently, is not expanded by moisture. It is a little exciting even to meet with a rock covered with these *livid* (?) green aprons, betraying so much life. Some of them are three quarters of a foot in diameter. What a growth for a bare rock!

April 22. Hear martins about a box.

P. M. — To Hubbard's Great Meadow.

The spawn of April 18th is gone! It was fresh there and apparently some creature has eaten it. I see spawn (*R. halecina*-like) in the large pool southeast of this and catch one apparently common-sized (!) *R. halecina* near it. The general aspect dark-brown, with bronze-colored stripes along sides of back one tenth of an inch wide; spots, roundish with a dull-green halo; a roundish spot on each orbit; no bright spots. I catch apparently another in the Great Meadow, and I think some *R. halecina* are still spawning, for I see some fresh spawn there.

Andromeda, apparently a day or two, — at least at edge of Island Wood, which I have not seen.

I walk along several brooks and ditches, and see a great many yellow-spotted turtles; several couples copulating. The uppermost invariably has a depressed sternum while the other's is full. The *Emys picta* are evidently breeding also. See two apparently coupled on the shore. You see both kinds now in little brooks not more than a foot wide, slowly and awkwardly moving about one another. They can hardly make their way against the swift stream. I see one *E. picta* hold-

ing on to a weed with one of its fore feet. Meanwhile a yellow-spotted turtle shoots swiftly down the stream, carried along by the current, and is soon out of sight. The *E. picta* are also quite common in the shallows on the river meadows. I see many masses of empty or half-empty *R. halecina* spawn.

April 23. I receive to-day *Sanguinaria Canadensis* from Brattleboro, well in bloom, — how long? — in a large box full of mayflowers.

The toads ring now by day, but not very loud nor generally.

I see the large head apparently of a bullfrog, by the riverside. Many middle-sized frogs, apparently bullfrogs, green above and more or less dark-spotted, with either yellow or white throats, sitting along the water's edge now.

Catch two *Rana palustris* coupled.[1] They jump together into the river. The male is two and a quarter inches long. This I find to be about an average-sized one of four or five that I distinguish. Above, pale-brown or fawn-brown (another, which I think is a male from the size and the equally bright yellow of the abdomen and inside of limbs, is *dusky*-brown, and next day both the males are of this color; so you must notice the change of color of frogs), with two rows of very oblong, two or three or more times as long as broad, squarish-ended dark-brown spots with a light-brown edge, the rear ones becoming smaller and roundish; also a similar row along each side, and, beneath it, a

[1] *Vide* May 1st and 2d.

row of smaller roundish spots; as Storer says, a large roundish spot on the upper and inner side of each orbit and one on the top of the head before it; the throat and forward part of the belly, cream-colored; abdomen and inside of the limbs bright ochreous-yellow, part of which is seen in looking at the back of the frog. Tympanum slightly convex in middle. The female is about an eighth of an inch longer (another one is three quarters of an inch longer), beside being now fuller (probably of spawn). The pale brown, or fawn-brown, is more brassy or bronze-like and does not become darker next day. She has no very oblong squarish spots on back, but smaller and roundish ones and many fine dusky spots interspersed; is thickly dark-spotted on sides. Throat and belly, white or pale cream-color; sides of abdomen only and inside of limbs, much paler yellow than the male; has no dark spots on orbits or on head in front (another specimen has).

Saw a *Viola blanda* in a girl's hand.

April 24. A cold northwest wind. I go at 8 A. M. to catch frogs to compare with the *R. palustris* and bull-frog which I have, but I find it too cold for them. Though I walk more than a mile along the river, I do not get sight of one, and only of one or two turtles. Neither do I find any more frogs (though many *Emys picta*) at 4 P. M., it being still cold. Yet the frogs were quite numerous yesterday. This shows how sensitive they are to changes of temperature. Hardly one puts its head out of the water, if ever he creeps out the grassy

or muddy bottom this cold day. That proserpinaca deserves to be named after the frog, — *ranunculus*, or what-not, — it is so common and pretty at the bottom [of] the shallow grassy pools where I go looking for spawn. It is remarkable that I see many *E. picta* dead along the shore, dead within a few weeks apparently, also a sternothærus. One of the last, alive, emitted no odor to-day.

I find washed up by the riverside part of a pale-greenish egg-shell bigger than a hen's egg, which was probably the egg of a duck laid on the meadow last year or lately.

There is an abundance of the *R. halecina* spawn near the elm at the hill shore north of Dodd's. It is now semiopaque, greenish, and flatted down and run together, mostly hatched; and a good deal has been killed, apparently by the cold. The water thereabouts is swarming with the young pollywogs for a rod about, but where have all the frogs hidden themselves?

E. Hoar saw the myrtle-bird to-day.

The pollywogs must be a long time growing, for I see those of last year not more than two inches long, also some much larger.

The hatched frog-spawn is quite soft and apparently dissolving at last in the water. Yet possibly that mass of jelly once brought me on a stake was this jelly consolidated.

I find that my fish ova were not all killed some weeks ago in the firkin, as I supposed, for many that were accidentally left in it have hatched, and they bore the cold of last night better than those hatched earlier

and kept in the larger vessel (tub), which froze but thinly, while the firkin froze a quarter of an inch thick last night.

April 25. P. M. — To Assabet.

Approaching the Island, I hear the *phe phe, phe phe, phe phe, phe phe, phe*, the sharp whistling note, of a fish hawk, and, looking round, see him just afterward launching away from one of the swamp white oaks southwest of the Island. There is about half a second between each note, and he utters them either while perched or while flying. He shows a great proportion of wing and some white on back. The wings are much curved. He sails along some eighty feet above the water's edge, looking for fish, and alights again quite near. I see him an hour afterward about the same spot.

See a barn swallow. Also see one myrtle-bird, and Goodwin says he heard a stake-driver several days ago.

April 26. A little snow in the night, which is seen against the fences this morning. See a chewink (male) in the Kettell place woods.

April 27. It has been so cold since the 23d that I have not been able to catch a single frog, have hardly seen where one jumped, as I walked through the meadows looking for them, though in some warmer places I heard a low stertorous *R. halecina*-like note from a few. The tortoises are stirring much more. Frogs appear to love warm and moist weather, rainy or

cloudy. They will sit thickly along the shore, apparently small bullfrogs, etc., *R. palustris*.

My young fishes had the pectoral fins and tail very early developing, but not yet can I detect any other fins with my glass. They had mouths, which I saw them open as soon as hatched, and more and more a perch-like head. I think that with Hoar's microscope I detected two dorsal fins such as the perch have. When I put them suddenly in the sun they sink and rest on the bottom a moment.

In the French work for schools of Edwards and Comte, it is said that the perch spawns not till the age of three years, and in the spring. "The ova are joined together by some glutinous matter in long strings (*cordons*) intertwined with the reeds." (Page 36.)

I noticed yesterday that again the newly laid spawn at the cold pool on Hubbard's land was all gone, and that in the larger pool south of it was much diminished. What creature devours it?

Snows hard in afternoon and evening. Quite wintry. About an inch on ground the next morning.

April 28. Blustering northwest wind and wintry aspect.

A. M. — Down river to look at willows.

The common *S. cordata* apparently not yet within two days at least. This salix is not *always* conspicuously double-scaled, nor is the scale carried up on the catkin. It is not always even on that of the *S. Torreyana*.

I see the fish hawk again [two or three indecipherable words] Island. As it flies low, directly over my head,

I see that its body is white beneath, and the white on the forward side of the wings beneath, if extended across the breast, would form a regular crescent. Its wings do not form a regular curve in front, but an abrupt angle. They are loose and broad at tips.

This bird goes fishing slowly down one side of the river and up again on the other, forty to sixty feet high, continually poising itself almost or quite stationary, with its head to the northwest wind and looking down, flapping its wings enough to keep its place, sometimes stationary for about a minute. It is not shy. This boisterous weather is the time to see it.

I see the myrtle-bird in the same sunny place, south of the Island woods, as formerly. Thus are the earliest seen each spring in some warm and calm place by the waterside, when it is cool and blustering elsewhere. The barn swallows and a martin are already skimming low over that small area of smooth water within a few feet of me, never leaving that spot, and I do not observe them thus playing elsewhere. Incessantly stooping back and forth there.

P. M. — To Ledum Swamp.

At Clamshell Ditch, one *Equisetum sylvaticum* will apparently open to-morrow. Strawberries are abundantly out there; how long?

Some Salix tristis, bank near bæomyces. Did I not put it too early in last year's list of willows? Probably earlier elsewhere?

The snow was generally gone about 10 A. M., except in circular patches in the shadow of the still leafless trees.

April 29. Storrow Higginson plucked the uva-ursi fully out the 25th; perhaps two or three days, for it was nearly out, he says, the 18th!!! By his account it was on Pine Hill.

I heard yesterday at Ledum Swamp the lively, sweet, yet somewhat whimsical note of the ruby-crowned wren, and had sight of him a moment. Did I not hear it there the 10th?

Noticed a man killing, on the sidewalk by Minott's, a little brown snake with blackish marks along each side of back and a pink belly. Was it not the *Coluber amœnus?*

April 30. P. M. — I carry the rest of my little fishes, fifteen or twenty, to the cold pool in Hubbard's ground. They are about a quarter-inch long still, and have scarcely increased in length.

I learn that one farmer, seeing me standing a long time still in the midst of a pool (I was watching for hylodes), said that it was his father, who had been drinking some of Pat Haggerty's rum, and had lost his way home. So, setting out to lead him home, he discovered that it was I.

I find a *Fringilla melodia* nest with five eggs. Part, at least, must have been laid before the snow of the 27th, but it is perfectly sheltered under the shelving turf and grass on the brink of a ditch. The snow would not even have touched the bird sitting on them.

It is much warmer, and now for the first time since April 23d I find frogs out. (Perhaps I could have found some yesterday.)

I noticed one of the large scroll ferns, with its rusty wool, up eight inches on the 28th. See a white-throated sparrow by Cheney's wall, the stout, chubby bird.

After sundown. By riverside. — The frogs and toads are now fairly awake. Both are most musical now at evening. I hear now on various sides, along the river and its meadows, that low, stertorous sound, — *like* that of the *Rana halecina*, — which I have heard occasionally for a few days. (I also hear it in Stow's field by railroad, with toads' ringing.) It is exceedingly like the note of the *R. halecina*, yet I fancy it is somewhat more softly purring, with frequently a low quivering, chuckling, or inquisitive croak, which last takes the place of the bullfrog-like *er er er* of the *halecina*. This is the only difference between it and the *halecina* that I am sure of. The short quivering croak reminds me of the alarm (?) note of the hylodes. I suspect it is the *R. palustris*, now breeding.[1] I hear no snipe.

Frogs, etc., are perfect thermometers. Some that I had in a firkin were chilled to stiffness, while their fellows buried themselves again in the mud of the meadows; *i. e.*, in a cold night at this season they are stiffened in a tub of water, the small *R. palustris*, not being able to bury themselves in mud. They appear to lose their limbs or portions of them, which slough off in consequence.

[1] *Vide* May 1st.

X

MAY, 1858

(ÆT. 40)

May 1. A warm and pleasant day, reminding me of the 3d of April when the *R. halecina* waked up so suddenly and generally, and now, as then, apparently a new, allied frog is almost equally wide awake, — the one of last evening (and before).

When I am behind Cheney's this warm and still afternoon, I hear a voice calling to oxen three quarters of a mile distant, and I know it to be Elijah Wood's. It is wonderful how far the *individual* proclaims himself. Out of the thousand millions of human beings on this globe, I know that this sound was made by the lungs and larynx and lips of E. Wood, am as sure of it as if he nudged me with his elbow and shouted in my ear. He can impress himself on the very atmosphere, then, can launch himself a mile on the wind, through trees and rustling sedge and over rippling water, associating with a myriad sounds, and yet arrive distinct at my ear; and yet this creature that is felt so far, that was so noticeable, lives but a short time, quietly dies and makes no more noise that I know of. I can tell him, too, with my eyes by the very gait and motion of him half a mile distant. Far more wonderful his purely spiritual influence, — that after the lapse of thousands of years you may still detect the individual in the turn

of a sentence or the tone of a thought!! E. Wood has a peculiar way of modulating the air, imparts to it peculiar vibrations, which several times when standing near him I have noticed, and now a vibration, spreading far and wide over the fields and up and down the river, reaches me and maybe hundreds of others, which we all know to have been produced by Mr. Wood's pipes. However, E. Wood is not a match for a little peeping hylodes in this respect, and there is no peculiar divinity in this.

The inhabitants of the river are peculiarly wide awake this warm day, — fishes, frogs, and toads, from time to time, — and quite often I hear a tremendous rush of a pickerel after his prey. They are peculiarly active, maybe after the *Rana palustris*, now breeding. It is a perfect frog and toad day. I hear the stertorous notes of last evening from all sides of the river at intervals, but most from the grassiest and warmest or most sheltered and sunniest shores. I get sight of ten or twelve *Rana palustris* and catch three of them. One apparent male utters one fine, sharp squeak when caught. Also see by the shore one apparent young bullfrog (?), with bright or vivid light green just along its jaws, a dark line between this and jaws, and a white throat; head, brown above. This is the case with one I have in the firkin, which I think was at first a dull green. These are the only kinds I find sitting along the river. The *Rana palustris* is the prevailing one, and I suppose it makes the *halecina*-like sound described last night.[1] They will be silent for a long time. You

[1] It does. *Vide* May 2d.

will see perhaps one or two snouts and eyes above the surface, then at last may hear a coarsely purring croak, often rapid and as if it began with a *p*, at a distance sounding softer and like *tut tut, tut tut, tut,* lasting a second or two; and then, perchance, others far and near will be excited to utter similar sounds, and all the shore seems alive with them. However, I do not as yet succeed to see one make this sound. Then there may be another pause of fifteen or thirty minutes.

The *Rana palustris* leaves a peculiar strong scent on the hand, which reminds me of days when I went a-fishing for pickerel and used a frog's leg for bait. When I try to think what it smells like, I am inclined to say that it might be the bark of some plant. It is disagreeable. Some are in the water, others on the shore.

I do not see a single *R. halecina*. What has become of the thousands with which the meadows swarmed a month ago? They have given place to the *R. palustris*. Only their spawn, mostly hatched and dissolving, remains, and I expect to detect the spawn of the *palustris* soon.

I find many apparent young bullfrogs in the shaded pools on the Island Neck.[1] There is one good-sized bullfrog among them.[2]

The toads are so numerous, some sitting on all sides, that their ring is a continuous sound throughout the day and night, if it is warm enough, as it now is, except perhaps in the morning. It is as uninterrupted to the

[1] Probably *R. fontinalis*.

[2] This probably the first bullfrog of the season.

ear as the rippling breeze or the circulations of the air itself, for when it dies away on one side it swells again on another, and if it should suddenly cease all men would exclaim at the pause, though they might not have noticed the sound itself.

It occurs to me that that early purple grass on pools corresponds to the color of leaves acquired after the frosts in the fall, as if the cold had, after all, more to do with it than is supposed. As the tops of the *Juncus filiformis* are red, and the first *Lysimachia quadrifolia* red-brown.

As I sit above the Island, waiting for the *Rana palustris* to croak, I see many minnows from three quarters to two inches long, but mostly about one inch. They have that distinct black line along each side from eye to tail on a somewhat transparent brownish body, dace-like, and a very sharply forked tail. When were they hatched? Certainly two or three months ago, at least; perhaps last year. Is it not the brook minnow?

I also hear the myrtle-birds on the Island woods. Their common note is somewhat like the *chill-lill* or jingle of the *F. hyemalis*. Ephemeræ quite common over the water.

Suddenly a large hawk sailed over from the Assabet, which at first I took for a hen-harrier, it was so neat a bird and apparently not very large. It was a fish hawk, with a very conspicuous white crown or head and a uniform brown above elsewhere; beneath white, breast and belly. Probably it was the male, which is the smaller and whiter beneath. A wedge-shaped tail.

He alighted on a dead elm limb on Prichard's ground, and at this distance, with my glass, I could see some dark of head above the white of throat or breast. He was incessantly looking about as if on his guard. After fifteen minutes came a crow from the Assabet and alighted cawing, about twenty rods from him, and ten minutes later another. How alert they are to detect these great birds of prey! They do not thus pursue ordinary hawks, and their attendance alone might suggest to unskillful observers the presence of a fish hawk or eagle. Some crows up the Assabet evidently knew that he was sitting on that elm far away. He sailed low almost directly over my boat, fishing. His wings had not obviously that angular form which I thought those of another had the other day.

The old *Salix sericea* is now all alive with the hum of honey-bees. This would show that it is in bloom. I see and hear one humblebee among them, inaugurating summer with his deep bass. May it be such a summer to me as it suggests. It sounds a little like mockery, however, to cheat me again with the promise of such tropical opportunities. I have learned to suspect him, as I do all fortune-tellers. But no sound so brings round the summer again. It is like the drum of May training. This reminds me that men and boys and the most enlightened communities still love to march after the beating of a drum, as do the most aboriginal of savages.

Two sternothæruses which I catch emit no scent yet. Hear a thrasher.

Hear that a shad-bush is out at Lee's Cliff.

May 2. Sit without fire to-day and yesterday.

I compare the three *Rana palustris* caught yesterday with the male and female of April 23d. The males agree very well. What I have regarded as the groundwork varies from pale brown to dusky brown, even in the same specimen at different times. The present female is larger than that of April 23d, more than half an inch longer than her male, and she has the round dark spots on the orbits and one in front on head and also oblong-square spots on back. She is also dusky-brown like male. None of all have any green. I at last hear the note, for two are coupled in a firkin in my chamber, under my face. It is made by the male alone, and is, as I supposed, the sound of April 30th and May 1st, — the *tut tut tut*, more or less rapidly repeated, and a frequent querulous or inquisitive *cr-r-rack*, half a second long. It makes these sounds only when I excite it by putting others of its kind near it. Its pouches are distended laterally, apparently beneath and behind the eye, and not very conspicuous. Close by, it sounds like a dry belching sound, the bursting of little bubbles more or less rapidly, and the querulous note may be the same very rapidly repeated.

I doubt if I have heard any sound from a bullfrog in river yet.

P. M. — Down river.

The *Salix Babylonica* (fertile) behind Dodd's is more forward than the *alba* by my boat. Put it just before it. See stake-driver. At mouth of the Mill Brook, I hear, I should say, the true *R. halecina* croak, *i. e.* with the faint bullfrog-like *er-er-er* intermixed. Are they

still breeding? Peetweet on a rock. See and hear the red-wings in flocks yet, making a great noise.

If I were to be a frog hawk for a month I should soon know some things about the frogs. How patiently they skim the meadows, occasionally alighting, and fluttering as if it were difficult ever to stand still on the ground. I have seen more of them than usual since I too have been looking for frogs. Hear a tree-toad.

May 3. P. M. — Ride to Flint's Pond to look for *Uvularia perfoliata*. *Salix purpurea* in Monroe's garden effete. Apparently blooms with our early willows; say 10th of April?

At Hosmer's medicinal (?) spring, Everett's farm, *Ranunculus repens*, abundantly out, apparently several days.

Hear of a peach out in Lincoln.

Probably I heard the black and white creeper April 25th. I hear it and see it well to-day.

Comptonia well out, how long? *Viola cucullata*, how long? Hear of robins' nests with four eggs. See no signs of the *Uvularia perfoliata* yet; apparently will not bloom within ten days.

E. Hoar brings me a twig of a willow plucked in Newton, which was killed some weeks ago, when it had just begun to bloom. The catkins look peculiarly woolly, and the scales peculiarly rounded or blunt. Is it the *eriocephala*? Our earliest gooseberry not yet, perhaps because there will be but few blossoms on it this year. Partridges have been heard drumming.

In the woods near the *Uvularia perfoliata*, see and hear a new bird to me. At first it was silent, and I took

it for the common pewee, but, bringing my glass to bear on it, found it to be pure white throat and beneath, yellow on sides of body or wings, greenish-yellow back and shoulders, a white or whitish ring about eyes, and a light mark along side of head, two white bars on wings, apparently black bill and dark or perhaps slate-colored (?) wings and above tail. It surprised me by singing in a novel and powerful and rich strain. Yet it may be the white-eyed vireo (which I do not know), if it comes so early.[1] Nuttall says it comes to Cambridge about the middle of April.

May 4. The *Salix pedicellaris* by railroad, apparently not for two or three days. The Missouri currant, probably to-day.

P. M. — By boat to Holden Swamp.

To go among the willows now and hear the bees hum is equal to going some hundreds of miles southward toward summer.

I see along the sides of the river, *i. e.*, where the bottom is permanently covered, what I have heretofore called the oat spawn, attached to old pontederia stems, etc.,[2] now some foot or eighteen inches under the surface. It is not black and white, like that of the *Rana halecina, sylvatica,* and *palustris,* which I cannot distinguish from one another, but a pale brown or fawn-color. Some is pretty fresh or recently laid, others already flatted out. Hence, from comparison with my earlier *sylvatica* and *halecina* spawn, I judge that it may have been laid ten days.[3]

[1] *Vide* the 9th.

[2] *Vide* the 8th.

[3] Is it not that of the *R. fontinalis*? *Vide* June 8th.

At Clamshell Shore, I see a clam lying up with open valves.

Salix pedicellaris at Holden's Swamp, staminate, out apparently two days.

It is still warmer than May 1st, yet I hear the stertorous *tut tut tut* of hardly so many frogs (*R. palustris* chiefly, I suppose) as then. As with the *halecina*, it is the first sudden heats that excite them most, methinks.

I find hopping in the meadow a *Rana halecina*, much brighter than any I have seen this year. There is not only a vivid green halo about each spot, but the back is vivid light-green between the spots. I think this was not the case with any of the hundreds I saw a month ago!! Why?? The brassy lines along the sides of the back are narrower (only about one sixteenth of an inch) and more prominent than the more fawn-colored lines of the *R. palustris*. In this one, which I carry home and compare with the *palustris*, there is a large spot on each orbit, but none on the top of the head in front. It is all white beneath, except a tinge of greenish yellow on the abdomen.

Witherell speaks of the *R. palustris* as the yellow-legged frog, very properly. See several bullfrogs along the river, but silent.

I go into Holden Swamp to hear warblers. See a little blue butterfly (or moth) — saw one yesterday — fluttering about over the dry brown leaves in a warm place by the swamp-side, making a pleasant contrast. From time to time have seen the large *Vanessa Antiopa* resting on the black willows, like a leaf still adhering.

As I sit there by the swamp-side this warm summery afternoon, I hear the crows cawing hoarsely, and from time to time see one flying toward the top of a tall white pine. At length I distinguish a hen-hawk perched on the top. The crow repeatedly stoops toward him, now from this side, now from that, passing near his head each time, but he pays not the least attention to it.

I hear the *weese wese wese* of the creeper continually from the swamp. It is the prevailing note there. And methought I heard a redstart's note (?), but oftener than the last I heard the tweezer note, or *screeper* note, of the parti-colored warbler, bluish above, yellow or orange throat and breast, white vent, and white on wings, neck *above* yellowish, going restlessly over the trees — maples, etc. — by the swamp, in creeper fashion, and as you may hear at the same time the true creeper's note without seeing it, you might think it uttered the creeper's note also.

The red-wings, though here and there in flocks, are apparently beginning to build. I judge by their shyness and alarm in the bushes along the river and their richer, solitary warbling.

Coming back, I talk with Witherell at William Wheeler's landing. He comes pushing Wheeler's square-ended boat down-stream with a fish-spear. Says he caught a snapping turtle in the river May 1st. He sits on the side of my boat by the shore a little while, talking with me. There is a hole in the knee of his pants as big as your hand, and he keeps passing his hand

over this slowly, to hide his bare skin, which is sunburnt and the color of his face, though the latter is reddened by rum, of which his breath smells. But how intimate he is with mud and its inhabitants. He says he caught a large pickerel the other night with spawn in it yet; that Henry Bigelow put many little trout into that round pond (Green Pond he calls it) on the Marlborough road, which Elbridge Haynes caught a few years after, weighing two or three pounds apiece. A man told him that he saw a trout weighing about a pound and a half darting at a pickerel, and every time he darted he took a bit off a fin, and at last the man walked in and caught the pickerel, and it weighed five pounds. This was in Spectacle Pond in Littleton. A fisherman told him once that the common eel "gendered" into the river clam, and the young fed on the clam till they were big enough to get other food, and hence you found so many dead clams in the river. I asked him if he knew what fish made the stone-heaps in the river. He said the lamprey eel. He saw one making one last spring about this time, as he was going across the fields by the river near Tarbell's to get seed corn. It was a single lamprey piling up the stones. He used to see thousands of them where he lived a boy, where the lead pipe factory was.

Agassiz says in his Introduction (page 175), "I have known it [the *Chelonara serpentina*] snapping in the same fierce manner [which somebody else had described at a later period when it was very young] as it does when full grown, at a time it was still a pale almost colorless embryo, wrapped up in its fœtal

envelopes, with a yolk larger than itself hanging from its sternum, three months before hatching."

May 5. The two *Rana palustris* which I caught May 1st have been coupled ever since in a firkin in my chamber. They were not coupled when I caught them. Last night I heard them hopping about, for the first time, as if trying to get out. Perhaps the female was trying to find a good place to deposit her spawn. As soon as I get up I find that she has dropped her spawn, a globular mass, wrong or white side up, about two inches in diameter, which still adheres to her posterior, and the male still lies on her back. A few moments later they are separate. The female moves about restlessly from time to time, the spawn still attached, but soon it is detached from her posterior, still adhering to her right leg, as if merely sticking to it. In the course of the forenoon it becomes quite detached. At night they are coupled again. The spawn was not dropped at 10 P. M. the evening before, but apparently in the night. The female now looked long and lank. This is the first spawn I have known to be dropped by the *R. palustris*. I should not know it by its appearance from that of the *sylvatica* and *halecina*. The only frogs hereabouts whose spawn I do not know are the bullfrogs, *R. fontinalis*, and hylodes. The first have not begun to trump, and I conclude are not yet breeding; the last, I think, must be nearly done breeding, and probably do not put their spawn in the river proper; possibly, therefore, the oat spawn of yesterday may be that of the *R. fontinalis*.[1]

[1] *Vide* June 8th.

Saw and heard the small pewee yesterday. The aspen leaves at Island to-day appear as big as a ninepence suddenly.

May 6. I heard from time to time a new note from my *Rana palustris* in the firkin in my chamber. It was that strong vibratory purr or *prr-r-r-a-a-a*, as if it began with a *p*, lasting two or three seconds and sometimes longer. In the firkin near my bed, it sounded just like a vibrating sliver which struck hard and rapidly against the rail [it] belonged to, — *dry*, like a fine and steady watchman's rattle sounding but [a] little while. I recognized it as a sound I hear along the riverside. It was like the *tut tut tut* more sharply and very rapidly or closely sounded perchance; perhaps even like the tapping of a woodpecker. Yes, quite like it thus close by.

This morning that spawn laid night before last has expanded to three and a half inches in diameter.

P. M. — To Trillium Wood.

It is a muggy and louring afternoon, and I go looking for toad spawn and for frogs. In all cases in which I have noticed frogs coupled this year, — the *sylvatica*, *halecina*, and *palustris*, — the female has been considerably the largest. The most common frog that I get sight of along the brooks and ditches this afternoon, and indeed for some weeks in similar localities and even in some parts of the river shore, is what I have called the young *R. pipiens*, with commonly a dull-green head and sides of head, sometimes bright green, and back dusky-spotted. Can this be the bull-

frog? Is it not the *fontinalis* with less bright green and a white throat? Sometimes it is yellow-throated. I saw lately in the river a full-grown bullfrog, with, *I think*, a white throat.

I see a *Rana sylvatica* by a ditch in Stow's meadow, fifteen rods from the (Trillium) Wood. The *Salix rostrata* staminate flowers are of very peculiar yellow, — a bright, what you might call *yellow* yellow.

A boy brings me to-day an *Attacus Cecropia* moth which has come out of a cocoon in his trunk. It is, I think, the male, a dark brown above, and considerably larger than mine. It must be about seven inches in alar extent.

Minott remembers the *Rana palustris*, or yellow-legged one, as "the one that stinks so," as if that scent were peculiar to it. I suppose it is. He says that the white-legged one (the *halecina*) was preferred for invalids, *i. e.* their legs, as being sweeter. He says that there used to be a great many more bullfrogs than there are now, and what has got them he does not know.

About 9 P. M. I went to the edge of the river to hear the frogs. It was a warm and moist, rather foggy evening, and the air full of the ring of the toad, the peep of the hylodes, and the low *growling* croak or stertoration of the *Rana palustris*. Just there, however, I did not hear much of the toad, but rather from the road, but I heard the steady peeping of innumerable hylodes for a background to the *palustris* snoring, further over the meadow. There was a universal snoring of the *R. palustris* all up and down the river on each side, the very sounds that mine made in my

chamber last night, and probably it began in earnest last evening on the river. It is a hard, dry, unmusical, *fine* watchman's-rattle-like stertoration, swelling to a speedy conclusion, lasting say some four or five seconds usually. The rhythm of it is like that of the toads' ring, but not the sound. This is considerably like that of the tree-toad, when you think of it critically, after all, but is not so musical or sonorous as that even. There is an occasional more articulate, querulous, or rather quivering, alarm note such as I have described (May 2d). Each shore of the river now for its whole length is all alive with this stertorous purring. It is such a sound as I make in my throat when I imitate the growling of wild animals. I have heard a little of it at intervals for a week, in the warmest days, but now at night it [is] universal all along the river. If the note of the *R. halecina*, April 3d, was the first awakening of the river meadows, this is the second, — considering the hylodes and toads less (?) peculiarly of the river meadows. Yet how few distinguished this sound at all, and I know not one who can tell what frog makes it, though it is almost as universal as the breeze itself. The sounds of those three reptiles now fill the air, especially at night. The toads are most regardless of the light, and regard less a cold day than the *R. palustris* does. In the mornings now, I hear no *R. palustris* and no hylodes, but a few toads still, but now, at night, all ring together, the toads ringing through the day, the hylodes beginning in earnest toward night and the *palustris* at evening. I think that the different epochs in the revolution of the seasons

may perhaps be best marked by the notes of reptiles. They express, as it were, the very feelings of the earth or nature. They are perfect thermometers, hygrometers, and barometers.

One of our cherries opens.

I heard a myrtle-bird's[1] *tull-lull* yesterday, and that somebody else heard it four or five days ago.

Many are catching pouts this louring afternoon, in the little meadow by Walden.

The thinker, he who is serene and self-possessed, is the brave, not the desperate soldier. He who can deal with his thoughts as a material, building them into poems in which future generations will delight, he is the man of the greatest and rarest vigor, not sturdy diggers and lusty polygamists. He is the man of energy, in whom subtle and poetic thoughts are bred. Common men can enjoy partially; they can go a-fishing rainy days; they can *read* poems perchance, but they have not the vigor to beget poems. They can enjoy feebly, but they cannot create. Men talk of freedom! How many are free to think? free from fear, from perturbation, from prejudice? Nine hundred and ninety-nine in a thousand are perfect slaves. How many can exercise the highest human faculties? He is the man truly — courageous, wise, ingenious — who can use his thoughts and ecstasies as the material of fair and durable creations. One man shall derive from the fisherman's story more than the fisher has got who tells it. The mass of men do not know how to cultivate the fields they traverse. The mass glean only a scanty pittance

[1] White-throat sparrow.

where the thinker reaps an abundant harvest. What is all your building, if you do not build with thoughts? No exercise implies more real manhood and vigor than joining thought to thought. How few men can tell what they have thought! I hardly know half a dozen who are not too lazy for this. They cannot get over some difficulty, and therefore they are on the long way round. You conquer fate by thought. If you think the fatal thought of men and institutions, you need never pull the trigger. The consequences of thinking inevitably follow. There is no more Herculean task than to think a thought about this life and then get it expressed.

Horticulturalists think that they make flower-gardens, though in their thoughts they are barren and flowerless, but to the poet the earth is a flower-garden wherever he goes, or thinks. Most men can keep a horse or keep up a certain fashionable style of living, but few indeed can keep up great expectations. They justly think very meanly of themselves.

May 7. Plant melons. Hear young bluebirds in the box. Did I not see a bank swallow fly by?

Cousin Charles says that he drove Grandmother over to Weston the 2d of May; on the 3d it snowed and he rode about there in a sleigh; on the 4th and the 5th, when he returned in a chaise to Concord, it was considered dangerous on account of the drifts.

P. M. — To Assabet by Tarbell's.

I see the second amelanchier well out by railroad. How long elsewhere? The wild gooseberry here and

there along the edge of river in front of Tarbell's, like our second one, apparently as early as in garden, and will open in a few days.

I see a wood tortoise by the river there, half covered with the old withered leaves. Taking it up, I find that it must have lain perfectly still there for some weeks, for though the grass is all green about it, when I take it up, it leaves just such a bare cavity, in which are seen the compressed white roots of the grass only, as when you take up a stone. This shows how sluggish these creatures are. It is quite lively when I touch it, but I see that it has some time lost the end of its tail, and possibly it has been sick. Yet there was another crawling about within four or five feet. It seems, then, that it will lie just like a stone for weeks immovable in the grass. It lets the season slide. The male yellow-spotted and also wood turtle have very distinctly depressed sternums, but not so the male *Emys picta* that I have noticed. The earliest apple trees begin to leave and to show green veils against the ground and the sky. See already a considerable patch of *Viola pedata* on the dry, bushy bank northeast of Tarbell's.

May 8. P. M. — To stone-heaps.

Mr. Wright of the factory village, with whom I talked yesterday, an old fisherman, remembers the lamprey eels well, which he used to see in the Assabet there, but thinks that there have been none in the river for a dozen years and that the stone-heaps are not made by them. I saw one apparently just formed yesterday. Could find none April 15th. This after-

noon I overhaul two new ones in the river opposite Prescott Barrett's, and get up more than a peck of stones. The nests are quite large and very high, rising to within a foot of the surface where the water is some three feet deep. I cannot detect any ova or young fishes or eels in the heap, but a great many insects, pashas with two tails, and, I think, some little leeches only. The larger stones are a little larger than a hen's egg, but the greater part of the heap is merely a coarse gravel.

I see a great deal of the oat spawn, generally just flatted out, in that long pokelogan by the Assabet Bath-Place. It is over the coarse, weedy (pontederia and yellow lily stubble), and not the grassy bottom, commonly where there is more or less water all summer.

The herb-of-St.-Barbara. Broke off a twig of Prichard's Canada plum in the evening, from which I judge that it may have opened to-day.

May 9. P. M. — To Holden and to Ledum Swamp.

See two *Rana halecina*. They have the green halo, but are plain brown between the spots on the back and not vivid light-green like the one of May 4th.

See in *Ludwigia palustris* ditch on Hubbard's land evidently toad-spawn already hatched, or flatted out. I distinguish the long strings, now straighter than usual and floating thin on the surface. It is less obvious than frog-spawn, and might easily be overlooked on a slimy surface. I can distinguish the little pollywog while yet in the ova by their being quite small and

very black. This makes the fifth kind of frog or toad spawn that I have detected this year.

See, in the Holden Swamp wood, the bird of May 3d. It has sly and inquisitive ways, holding down its head and looking at me at some distance off. It has a distinct white line along the bill and about the eyes, and no yellow there, as is said of the white-eyed vireo, and I am now inclined to think it the *solitary vireo* (?), whose song is not described, and which is considered rare. I should say it had a blue-slate head, and, I note, a distinct yellowish *vent*, which none of the vireos are allowed to have!! The sides of the body are distinctly yellow, but there is none at all on the throat or breast.

Vaccinium Pennsylvanicum, — how long? — by owl-nest tree. The parti-colored warbler is very common and musical there, — my tweezer-bird, — making the *screep screep screep* note. It is an almost incessant singer and a very handsomely marked bird. It frequents the spruce trees, at regular intervals pausing as it flits, hops, and creeps about from limb to limb or up the main stem, and holding up its head, utters its humble notes, like *ah twze twze twze*, or *ah twze twze twze twze*.

I notice very large clams, apparently the *Unio complanatus* (*vide* two specimens in drawer), or common, in West Meadow Brook near the road, one more than four and a half inches long. I have before seen them very large in brooks.

A dandelion perfectly gone to seed, a complete globe, a system in itself.

My *Rana palustris* spawn, laid in house May 5th, in the sun this afternoon swells and rises to the surface in the jar, so that the uppermost ova project slightly above it.

May 10. A rather warm and pleasant day. Going down-town in the morning, I hear the warbling vireo, golden robin, catbird, and summer yellowbird. For some days the *Salix alba* have shown their yellow wreaths here and there, suggesting the coming of the yellowbird, and now they are alive with them.

About 8.30 A. M., I go down the river to Ball's Hill.

As I paddle along, hear the Maryland yellow-throat, the bobolink, the oven-bird, and the yellow-throated vireo.

That early glaucous, sharp-pointed, erect sedge, grass-like, by the riverside is now apparently in prime. Is it the *Carex aquatilis?*

I hear in several places the low dumping notes of awakened bullfrogs, what I call their *pebbly* notes, as if they were cracking pebbles in their mouths; not the plump *dont dont* or *ker dont*, but *kerdle dont dont.* As if they sat round mumbling pebbles. At length, near Ball's Hill, I hear the first regular bullfrog's trump. Some fainter ones far off are very like the looing [*sic*] of cows. This sound, heard low and far off over meadows when the warmer hours have come, grandly inaugurates the summer. I perspire with rowing in my thick coat and wish I had worn a thin one. This trumpeter, marching or leaping in the van of advancing summer, whom I now hear coming on

over the green meadows, seems to say, "*Take off your coat, take off your coat, take off your coat!*" He says, "Here comes a gale that I can breathe. This is something like; this is what I call summer." I see three or four of them sitting silent in one warm meadow bay. Evidently their breeding-season now begins. But they are soon silent as yet, and it is only an occasional and transient trump that you hear. That season which is bounded on the north, on the spring side at least, by the trump of the bullfrog. This note is like the first colored petals within the calyx of a flower. It conducts us toward the germ of the flower summer. He knows no winter. I hear in his tone the rumors of summer heats. By this note he reassures the season. Not till the air is of that quality that it can support this sound does he emit it. It requires a certain sonorousness. The van is led by the croaking wood frog and the little peeping hylodes, and at last comes this pursy trumpeter, the air growing more and more genial, and even sultry, as well as sonorous. As soon as Nature is ready for him to play his part, she awakens him with a warmer, perchance a sultry, breath and excites him to sound his trombone. It reminds me at once of tepid waters and of bathing. His trump is to the ear what the yellow lily or spatter-dock is to the eye. He swears by the powers of mud. It is enough for the day to have heard only the first half-trump of an early awakened one from far in some warm meadow bay. It is a certain revelation and anticipation of the livelong summer to come. It gives leave to the corn to grow and to the heavens to thunder and lighten. It gives leave

to the invalid to take the air. Our climate is now as tropical as any. It says, Put out your fires and sit in the fire which the sun has kindled.

I hear from some far meadow bay, across the Great Meadows, the half-sounded trump of a bullfrog this warm morning. It is like the tap of a drum when human legions are mustering. It reminds me that summer is now in earnest mustering her forces, and that ere long I shall see their waving plumes and glancing armor and hear the full bands and steady tread. The bullfrog is earth's trumpeter, at the head of the terrene band. He replies to the sky with answering thunder. I see still five or six ducks, which I scare from the Great Meadows. Some may be going to breed here.

How much expression there is in the *Viola pedata!* I do not know on the whole but it is the handsomest of them all, it is so large and grows in such large masses. Yet I have thought there was a certain shallowness in its expression. Yet it spreads so perfectly open with its face turned upward that you get its whole expression.

P. M. — To Walden.

R. W. E. is sure that he heard a cuckoo to-day. A hair-bird's nest in his yard with one egg.

The northern wild red cherry by Everett's, apparently to-morrow. Hear in various woods the yorrick note of the veery. So the bird seen long since probably was not the veery. A boy found yesterday one or two of the fringed polygala out.

It is remarkable how many new birds have come all at once to-day. The hollow-sounding note of the

oven-bird is heard from the depth of the wood. The warbling vireo cheers the elms with a strain for which they must have pined. The trees, in respect to these new arrivers, have been so many empty music-halls. The oriole is seen darting like a bright flash with clear whistle from one tree-top to another over the street. The very catbird's mew in the copse harmonizes with the bare twigs, as it were shaming them into life and verdure, and soon he mounts upon a tree and is a new creature. Toward night [the] wood thrush ennobles the wood and the world with his strain.

May 11. P. M. — Wishing to get one of the little brook (?) pickerel, of Hubbard's ditches, in the arethusa meadow, I took a line in my pocket, and, baiting with a worm and cutting a pole there, I caught two directly. The biggest was nine inches long and thickly barred transversely with broken dark greenish-brown lines, alternating with golden ones. The back was the dark greenish brown with a pale-brown dorsal line. Both have the vertical dark or black line beneath the eyes and appearing, with the pupil and a mark above, to pass through it. Noticed the same in the *reticulatus* the other day. The head, *i. e.* to the rear of the gills, just one fourth the whole length. From the front of the eye to the end of the lower jaw about one ninth the whole length. In the largest specimen the lower jaw projects one eleventh of an inch beyond the upper. I put the small one, six or seven inches long, in spirits. Opening the larger, I found that it was a female, and that the ova were few and small as yet!!

I also found that apparently its last food was another pickerel two thirds as big as itself, the tail end not yet digested. So it appears that you may dig a ditch in the river meadow, for the sake of peat, and though it have no other connection with brook or river except that it is occasionally overflowed, though only twenty or thirty feet long by three or four wide and one to three deep, you may have pickerel in it nine inches long, at least, and these live in part by devouring one another. Surely it cannot be many pickerel that the bigger ones find to devour there. You might think they would have more sympathy with their fellow-prisoners. This ditch, or these ditches — for I caught one in two ditches — have not been overflowed or connected with the brook or river since the spring of '57, I think, — certainly not any of them since last fall. Yet you may find a few sizable pickerel in such narrow quarters. I have seen them several together in much smaller and shallower ditches there, and they will bury themselves in the mud at your approach. Yet, opening one, you may perchance discover that he has just swallowed his sole surviving companion! You can easily distinguish the transverse bars a rod off, when the fish is in the water. Melvin says they get to weigh about two pounds.[1]

May 12. Chimney swallows.

P. M. — Up Assabet.

On the 8th I noticed a little pickerel recently dead in the river with a slit in its upper lip three quarters of an inch long, apparently where a hook had pulled

[1] It appears to be the *Esox fasciatus*. *Vide* May 27.

out. There was a white fuzzy swelling at the end of the snout accordingly, and this apparently had killed it.

It rained last night, and now I see the elm seed or samaræ generally fallen or falling. It not only strews the street but the surface of the river, floating off in green patches to plant other shores. The rain evidently hastened its fall. This must be the earliest of trees and shrubs to go to seed or drop its seed. The white maple keys have not fallen. The elm seed floats off down the stream and over the meadows, and thus these trees are found bordering on the stream. By the way, I notice that birches near meadows, where there is an exceedingly gentle inclination, grow in more or less parallel lines a foot or two apart, parallel with the shore, apparently the seed having been dropped there either by a freshet or else lodged in the parallel waving hollows of the snow.

It clears off in the forenoon and promises to be warm in the afternoon, though it at last becomes cool. I see now, as I go forth on the river, the first summer shower coming up in the northwest, a dark and well-defined cloud with rain falling sheaf-like from it, but fortunately moving off northeast along the horizon, or down the river. The peculiarity seems to be that the sky is not generally overcast, but elsewhere, south and northeast, is a fair-weather sky with only innocent cumuli, etc., in it. The thunder-cloud is like the ovary of a perfect flower. Other showers are merely staminiferous or barren. There are twenty barren to one fertile. It is not commonly till thus late in the season that the fertile are seen. In the thunder-cloud, so

distinct and condensed, there is a positive energy, and I notice the first as the bursting of the pollen-cells in the flower of the sky.

Waded through the west-of-rock, or Wheeler, meadow,[1] but I find no frog-spawn there!! I do not even notice tadpoles. Beside that those places are now half full of grass, some pools where was spawn are about dried up (!), as that in Stow's land by railroad. Where are the tadpoles? There is much less water there than a month ago. Where, then, do the *Rana palustris* lay their spawn? I think in the river, because it is there I hear them, but I cannot see any. Perhaps they choose pretty deep water, now it is so warm. Now and for a week I have noticed a few pads with wrinkled edges blown up by the wind. Already the coarse grass along the meadow shore, or where it is wettest, is a luxuriant green, answering in its deep, dark color to the thunder-cloud, — both summer phenomena, — as if it too had some lightning in its bosom.

Some early brakes at the Island woods are a foot high and already spread three or four inches. The *Polygonatum pubescens* is strongly budded. The *Salix lucida* above Assabet Spring will not open for several days. The early form of the cinquefoil is now apparently in prime and very pretty, spotting the banks with its clear bright yellow.

See apparently young toad tadpoles now, — judging from their blackness, — now quite free from the eggs or spawn. If I remember rightly, the toad is colored

[1] And the next day over the large meadow south.

and spotted more like a frog at this season when it is found in the water.

Observed an *Emys insculpta*, as often before, with the rear edge on one side of its shell broken off for a couple of inches, as if nibbled by some animal. Do not foxes or musquash do this? In this case the under jaw was quite nervy.

Found a large water adder by the edge of Farmer's large mud-hole, which abounds with tadpoles and frogs, on which probably it was feeding. It was sunning on the bank and would face me and dart its head toward me when I tried to drive it from the water. It is barred above, but indistinctly when out of water, so that it then appears almost uniformly dark-brown, but in the water broad reddish-brown bars are seen, very distinctly alternating with very dark brown ones. The head was very flat and suddenly broader than the neck behind. Beneath it was whitish and reddish flesh-color. It was about two inches in diameter at the thickest part. They are the biggest and most formidable-looking snakes that we have. The inside of its mouth and throat was pink. It was awful to see it wind along the bottom of the ditch at last, raising wreaths of mud, amid the tadpoles, to which it must be a very sea-serpent. I afterward saw another running under Sam Barrett's grist-mill the same afternoon. He said that he saw a water snake, which he distinguished from a black snake, in an apple tree near by, last year, with a young robin in its mouth, having taken it from the nest. There was a cleft or fork in the tree which enabled it to ascend.

Find the *Viola Muhlenbergii* abundantly out (how long?), in the meadow southwest of Farmer's Spring.

The cinnamon and interrupted ferns are both about two feet high in some places. The first is more uniformly woolly down the stem, the other, though very woolly at top, being partly bare on the stem. The wool of the last is coarser.

George, the carpenter, says that he used to see a great many stone-heaps in the Saco in Bartlett, near the White Mountains, like those in the Assabet, and that there were no lampreys there and they called them "snake-heaps."

Saw some unusually broad chestnut planks, just sawed, at the mill. Barrett said that they came from Lincoln; whereupon I said that I guessed I knew where they came from, judging by their size alone, and it turned out that I was right. I had often gathered the nuts of those very trees and had observed within a year that they were cut down. So it appears that we have come to this, that if I see any peculiarly large chestnuts at the sawmill, I can guess where they came from, even know them in the log. These planks were quite shaky, and the heart had fallen out of one. Barrett said that it was apt to be the case with large chestnut. They use this wood for coffins, instead of black walnut.

May 13. P. M. — To Island.

Uvularia sessilifolia is well out in Island woods, opposite Bath Rock; how long?

The early willows now show great green wands a foot or two long, consisting of curled worm-like catkins

three inches long, now in their prime. They present conspicuous masses of green now before the leaves are noticeable, like the fruit of the elm at present. Some have begun to show their down. So this is apparently the next tree (or shrub?) after the elm to shed its seeds.

I wade through the great Lee farm meadow. Many *Emys picta* which I see have perfectly fresh and clear black scales now. I can even see the outlines of the bony plates beneath impressed in the scales. These turtles abound now in the shallow pools in the meadows with grassy or weedy bottoms. I notice on one, part of whose rear marginal plate is broken, two small claw-like horny appendages on the skin, just over the tail.

Viola lanceolata, how long?

As I sat in my boat near the Bath Rock at Island, I saw a red squirrel steal slyly up a red maple, as if he were in search of a bird's nest (though it is early for most), and I thought I would see what he was at. He crept far out on the slender branches and, reaching out his neck, nibbled off the fruit-stems, sometimes bending them within reach with his paw; and then, squatting on the twig, he voraciously devoured the half-grown keys, using his paws to direct them to his mouth, as a nut. Bunch after bunch he plucked and ate, letting many fall, and he made an abundant if not sumptuous feast, the whole tree hanging red with fruit around him. It seemed like a fairy fruit as I sat looking toward the sun and saw the red keys made all glowing and transparent by the sun between me and the body of the squirrel. It was certainly a cheering sight, a cunning red squirrel perched on a slender

twig between you and the sun, feasting on the handsome red maple keys. He nibbled voraciously, as if they were a sweet and luscious fruit to him. What an abundance and variety of food is now ready for him! At length, when the wind suddenly began to blow hard and shake the twig on which he sat, he quickly ran down a dozen feet.

The large globular masses of oat spawn, often on the very top of the old pontederia stems and also on the shooting *Equisetum limosum*, of the same color with the weeds and bottom, look like a seedy fruit which is divested of its rind.

May 14. 5.30 A. M. — Up railroad.

Hear and see the red-eye on an oak. The tail is slightly forked and apparently three quarters of an inch beyond wings; all whitish beneath. Hear and see a redstart. Methinks I did also on the 10th? The rhythm a little way off is *ah, tche tche tche'-ar.*

10 A. M. — To Hill.

A kingbird. Saw a young robin dead. Saw the *Viola palmata*, early form, yesterday; how long? Look at White Avens Shore. See what I call vernal grass in bloom in many places.

The *Salix sericea*, large and small, and the *petiolaris* or loose-catkinned (so far as I know their staminate flowers) are now out of bloom. The *rostrata* not quite done. Some of its catkins now three and a half inches long. The *alba* not quite done. *S. pedicellaris* by railroad about done, and the *Torreyana* done.

Picked up, floating, an *Emys picta*, hatched last year. It is an inch and one twentieth long in the upper shell and agrees with Agassiz's description at that age. Agassiz says he could never obtain a specimen of the *insculpta* only one year old, it is so rarely met with, and young *Emydidæ* are so aquatic. I have seen them frequently.

To-day, for the first time, it appears to me summer-like and a new season. There is a tender green on the meadows and just leafing trees. The blossoms of the cherry, peach, pear, etc., are conspicuous, and the air is suddenly full of fragrance. Houses are seen to stand amid blossoming fruit trees, and the air about them is full of fragrance and the music of birds.

As I go down the railroad at evening, I hear the incessant evening song of the bay-wing from far over the fields. It suggests pleasant associations. Are they not heard chiefly at this season?

The fruit of the early aspen is almost as large — its catkins — as those of the early willow. It will soon be ripe. The very common puffed-up yellow ovaries make quite a show, like some normal fruit; even quite pretty.

I discovered this morning that a large rock three feet in diameter was partially hollow, and broke into it at length with a stone in order to reach some large black crystals which I could partly see. I found that it had been the retreat of a squirrel, and it had left many nuts there. It had entered a small hole bristling with crystals, and there found a chamber or grotto a foot long at least, surrounded on all sides by crystals.

They thus explore and carry their nuts into every crevice, even in the rocks.

Celandine by cemetery. One tells me he saw to-day the arum flower.[1]

May 15. 7.30 A. M. — Ride to the Shawsheen in the northeast of Bedford. Meadow saxifrage well out, many of them, at the tan-yard meadow. The *Equisetum limosum* will apparently (?) open there in two or three days. *Thalictrum dioicum* abundant, apparently in prime; how long? It is a very interesting, graceful, and delicate plant, especially the sterile, with its pretty, commonly purple, petal-like sepals, and its conspicuous long yellow anthers in little bare clusters (?), trembling over the meadow. Yet a frail and rather inobvious plant. It grows on moist, commonly rocky slopes next to meadows at the base of hills, or by rocks in rather swampy woods. The meadows are now full of sedges in bloom, which shed clouds of pollen and cover my shoes with it. The cassia has not come up yet. High blueberries well out.

Hear the evergreen-forest note. Also, in rather low ground in Bedford, a note much like the summer yellowbird's, or between that and the redstart, and see the bird quite near, but hopping quite low on the bushes. It looked like the yellowbird with a bluish-ash top of head. What was it?[2]

The shad-bush in bloom is now conspicuous, its white flags on all sides. Is it not the most massy and

[1] I find it *well out* the 16th. See dicœcious specimens.

[2] Probably parti-colored warbler. *Vide* [p. 423].

conspicuous of any wild plant now in bloom? I see where the farmer mending his fence has just cut one to make part of the fence, and it is stretched out horizontally, a mass of white bloom.

Measured two apple trees by the road from the middle of Bedford and Fitch's mill. One, which divided at the ground, was thirteen and a half feet in circumference there, around the double trunk; but another, in a field on the opposite side of the road, was the most remarkable tree for size. This tree was exceedingly low for the size of its trunk, and the top rather small. At three feet from the ground it measured ten and a quarter feet in circumference, and immediately above this sent off a branch as big as a large apple tree. It was hollow, and on one side part of the trunk had fallen out. These trees mark the residence of an old settler evidently.

May 16. A. M. — Up Assabet.

Aralia nudicaulis at Island. The leaf-stalks are often eaten off, probably by some quadruped. The flower-buds of the *Cornus florida* are five eighths of an inch in diameter. The *Salix lucida* will hardly bloom within two days. The *S. Torreyana* catkins are so reddish that at a little distance it looks somewhat like the common black cherry now leafing.

A hummingbird yesterday came into the next house and was caught. Flew about our parlor to-day and tasted Sophia's flowers. In some lights you saw none of the colors of its throat. In others, in the shade the throat was a clear bright scarlet, but in the sun it glowed

with splendid metallic, *fiery* reflections about the neck and throat. It uttered from time to time, as it flew, a faint squeaking chirp or chirrup. The hum sounded more hollow when it approached a flower. Its wings fanned the air so forcibly that you felt the cool wind they raised a foot off, and nearer it was very remarkable. Does not this very motion of the wings keep a bird cool in hot weather?

The only indigenous willow I noticed yesterday on the Shawsheen — a mile below Fitch's mill — was the small *sericea*, such as by Assabet white maple. What was that loud but distant note of a bird, apparently in the low land, somewhat like the guinea-hen note, also reminding me a little of the plover about Truro light, but apparently a hawk? Got quite a view down the valley of the Shawsheen below the junction of Vine Brook, northeast, from a hill in the extreme northeast of Bedford.

P. M. — To *Uvularia perfoliata* at Flint's Pond.

See again the warbler of yesterday. All bright yellow beneath and apparently bluish-slate above, but I do not see it well. Its note, with little variation, is like *twit twit, twit twit, twitter twitter twe.* It must be the parti-colored warbler.[1]

Sat down in the sun in the path through Wright's wood-lot above Goose Pond, but soon, hearing a slight rustling, I looked round and saw a very large black snake about five feet long on the dry leaves, about a rod off. When I moved, it vibrated its tail very rapidly

[1] [Probably the Nashville warbler.]

and smartly, which made quite a loud rustling or rattling sound, reminding me of the rattlesnake, as if many snakes obeyed the same instinct as the rattlesnake when they vibrate their tails. Once I thought I heard a low hiss. It was on the edge of a young wood of oaks and a few white pines from ten to eighteen feet high, the oaks as yet bare of leaves. As I moved toward the snake, I thought it would take refuge in some hole, but it appeared that it was out on a scout and did not know of any place of refuge near. Suddenly, as it moved along, it erected itself half its length, and when I thought it was preparing to strike at me, to my surprise it glided up a slender oak sapling about an inch in diameter at the ground and ten feet high. It ascended this easily and quickly, at first, I think, slanting its body over the lowest twig of the next tree. There were seven little branches for nine feet, averaging about the size of a pipe-stem. It moved up in a somewhat zigzag manner, availing itself of the branches, yet also in part spirally about the main stem. It finds a rest (or hold if necessary) for its neck or forward part of its body, moving crosswise the small twigs, then draws up the rest of its body. From the top of this little oak it passed into the top of a white pine of the same height an inch and a half in diameter at the ground and two feet off; from this into another oak, fifteen feet high and three feet from the pine; from this to another oak, three feet from the last and about the same height; from this to a large oak about four feet off and three or four inches in diameter, in which it was about fourteen feet from the ground; thence through two more oaks, a little lower, at

intervals of four feet, and so into a white pine; and at last into a smaller white pine and thence to the ground. The distance in a straight line from where it left the ground to where it descended was about twenty-five feet, and the greatest height it reached, about fourteen feet. It moved quite deliberately for the most part, choosing its course from tree to tree with great skill, and resting from time to time while it watched me, only my approach compelling it to move again. It surprised me very much to see it cross from tree to tree exactly like a squirrel, where there appeared little or no support for such a body. It would glide down the proper twig, its body resting at intervals of a foot or two, on the smaller side twigs, perchance, and then would easily cross an interval of two feet, sometimes in an ascending, sometimes a descending, direction. If the latter, its weight at last bent the first twig down nearer to the opposite one. It would extend its neck very much, as I could see by the increased width of the scales exposed, till its neck rested across the opposite twig, hold on all the while tightly to some part of the last twig by the very tip of its tail, which was curled round it just like a monkey's. I have hardly seen a squirrel *rest* on such slight twigs as it would rest on in mid-air, only two or three not bigger than a pipe-stem, while its body stretched *clear* a foot at least between two trees. It was not at all like creeping over a coarse basket-work, but suggested long practice and skill, like the rope-dancer's. There were no limbs for it to use comparable for size with its own body, and you hardly noticed the few slight twigs it rested on, as it glided through the air. When its neck rested on the opposite twig, it was, as it

were, glued to it. It helped itself over or up them as surely as if it grasped with a hand. There were, no doubt, rigid kinks in its body when they were needed for support. It is a sort of endless hook, and, by its ability to bend its body in every direction, it finds some support on every side. Perhaps the edges of its scales give it a hold also. It is evident that it can take the young birds out of a sapling of any height, and no twigs are so small and pliant as to prevent it. Pendulous sprays would be the most difficult for it, where the twigs are more nearly parallel with the main one, as well as nearly vertical, but even then it might hold on by its tail while its head hung below. I have no doubt that this snake could have reached many of the oriole-nests which I have seen. I noticed that in its anger its rigid neck was very much flattened or compressed vertically. At length it coiled itself upon itself as if to strike, and, I presenting a stick, it struck it smartly and then darted away, running swiftly down the hill toward the pond.

Yellow butterflies. Nabalus leaves are already up and coming up in the wood-paths. Also the radical leaves of one variety of *Solidago arguta*, and apparently of *S. altissima*, are conspicuously up.

A golden-crowned thrush hops quite near. It is quite small, about the size of the creeper, with the upper part of its breast thickly and distinctly pencilled with black, a tawny head; and utters now only a sharp cluck for a *chip*. See and hear a redstart, the rhythm of whose strain is *tse'-tse, tse'-tse, tse'*, emphasizing the last syllable of all and not ending with the common *tsear*. Hear the night-warbler.

The *Uvularia perfoliata*, which did not show itself at all on the 3d, is now conspicuous, and one is open but will not shed pollen before to-morrow. It has shot up about ten inches in one case and bloomed within thirteen days!!

Ranunculus repens at Brister's Spring; how long? Was that *R. repens* at the Everett Spring on the 3d?[1] The whip-poor-will heard.

E. Hoar detected the other day two ovaries under one scale of a *Salix rostrata*, and, under another, a stamen and another stamen converted into an ovary.

May 17. Louring and more or less rainy.

P. M. — To Ledum Swamp.

Near Bæomyces Bank, I see the *Salix humilis* showing its down or cotton, and also the *S. tristis*.[2] Probably the last is wholly out of bloom some time. These, then, have ripe seed before the white maple.

It rains gently from time to time as I walk, but I see a farmer with his boys, John Hosmer, still working in the rain, bent on finishing his planting. He is slowly getting a soaking, quietly dropping manure in the furrows. This rain is good for thought. It is especially agreeable to me as I enter the wood and hear the soothing dripping on the leaves. It domiciliates me in nature. The woods are the more like a house for the rain; the few slight noises sound more hollow in them; the birds hop nearer; the very trees seem still and pensive. The clouds are but

[1] Yes.

[2] As I see the last still in bloom on the 20th on a north side-hill, *perhaps* this was a very small *humilis*?

a higher roof. The clouds and rain confine me to near objects, the surface of the earth and the trees. On the first holdings up in the intervals of the rain, the chewink is heard again, and the huckleberry-bird, and the evergreen-forest note, etc. I am coming in sight of the Charles Miles house. What a pleasant sandy road, soaking up the rain, that from the woods to the Miles house! The house becomes a controlling feature in the landscape when there is but one or two in sight.

The red maple tops ten days ago looked like red paint scaling off, when seen against houses. Now they have acquired a browner red. The *Populus grandidentata* now shows large, silvery, downy, but still folded, leafets.

You are more than paid for a wet coat and feet, not only by the exhilaration that the fertile moist air imparts, but by the increased fragrance and more gem-like character of expanding buds and leafets in the rain. All vegetation is now fuller of life and expression, somewhat like lichens in wet weather, and the grass. Buds are set in syrup or amber.

Measured the large apple tree in front of the Charles Miles house. It is nine feet and ten inches in circumference at two and a half feet from the ground, the smallest place below the branches, which are now four, — once five, one being cut, — starting at about five feet from the ground, and each as big as a good-sized modern tree. The top is large. The trunk looks healthy and is scarcely larger at the ground than where measured. It is large for an oak, a sturdy-looking tree, reminding one of the portly bodies of some of our grandfathers. It is not grafted. Once stood by the fence.

While I was measuring the tree, Puffer came along, and I had a long talk with him, standing under the tree in the cool sprinkling rain till we shivered. He said that he had seen pout-spawn attached to the under side of the white lily pads!! He thought he knew it from having seen it in their bodies. He thought that the pickerel-spawn was dropped in deep water and was devoured by pouts and eels. Wondered where eels bred, and how, for he never detected any spawn in them. Had been told (like Witherell) that they gendered into, *i. e.* copulated with, the clam. Told of a winter some fifteen years ago when there was a freshet in February, and the snapping turtles thought it was spring and came up with it on to the meadows; but it froze, and the ice settled on them and killed them when the water went down, and they were found dead in great numbers in the spring, — one that must have weighed one hundred pounds. Had seen pickerel that had been frozen four or five hours brought to life in water. Said that the black snake laid eight or ten eggs in a field. Once killed a very large water adder, and counted over sixty little snakes in it an inch or two long, and that was not all. Once he was going along, saw a water adder and heard a low sound which it made with its mouth, and he saw as many as twenty-five little snakes run into its mouth. Says the foxes eat the *Emys picta*, which I believe he called grass turtles. He had seen where they had opened them. But they could not get at the box turtle. Found some young stake-drivers as he was mowing.

When the hummingbird flew about the room yesterday, his body and tail hung in a singular manner be-

tween the wings, swinging back and forth with a sort of oscillating motion, not hanging directly down, but yet pulsating or teetering up and down.

I see a chewink flit low across the road with its peculiar flirting, undulating motion.

I thought yesterday that the view of the mountains from the bare hill on the Lincoln side of Flint's Pond was very grand. Surely they do not look so grand anywhere within twenty miles of them. And I reflected what kind of life it must be that is lived always in sight of them. I looked round at some windows in the middle of Lincoln and considered that such was the privilege of the inhabitants of these chambers; but their blinds were closed, and I have but little doubt that they are *blind* to the beauty and sublimity of this prospect. I doubt if in the landscape there can be anything finer than a distant mountain-range. They are a constant elevating influence.

Ranunculus acris, apparently in a day or two. Rhodora at Clamshell well out.

Just after hearing my night-warbler I see two birds on a tree. The one which I examined — as well as I could without a glass — had a white throat with a white spot on his wings, was dark above and moved from time to time like a creeper, and it was about the creeper's size.[1] The other bird, which I did not examine particularly, was a little larger and more tawny.[2]

It is remarkable how little way most men get in their

[1] The plate of *Sylvia Canadensis* in New York Reports has since reminded me of this.

[2] Perhaps golden-crowned thrush.

account of the mysteries of nature. Puffer, after describing the habits of a snake or turtle, — some peculiarity which struck him in its behavior, — would say with a remarkable air as if he were communicating or suggesting something, possibly explaining something, "Now I take it *that* is Nature; Nature did that."

May 18. Set an arbor-vitæ hedge fifteen inches east of our line; about twenty inches high.

May 19. A. M. — Surveying (by the eye) for Warner the meadow surveyed for John Hosmer in June, '56.

The black currant near southwest corner of his Saw Mill field (*Ribes floridum*) perfectly out; how long?

P. M. — To Everett Spring.

There appears to be quite a variety in the colors of the *Viola cucullata*. Some dark-blue, if not lilac (?), some with a very dark blue centre and whitish circumference, others dark-blue within and dark without, others all very pale blue. *Stellaria borealis* well out, apparently several days. What I called the *Ranunculus bulbosus* there May 3d proves to be the *R. repens*. It would appear then to be the earliest ranunculus. It is a dense bed of yellow now. I am struck by the light spot in the sinuses of the leaves. The *Equisetum sylvaticum* there is now of a reddish cast.

R. W. E. says that Pratt found yesterday out the trientalis, *Trillium cernuum*, and *Smilacina bifolia*.

Four rods plus south of the cross-fence over Everett's hill, on the west slope, I find the *Ranunculus aborti-*

vus, two plants open only; but will not shed pollen till to-morrow. A rod or two further the *Equisetum hyemale*, apparently a little past bloom, or effete, all the heads open.

Looking with my glass into the Gourgas pond-hole, I see three or four buck-bean blossoms. Two birds about the size and of the appearance of a pigeon or turtle dove start up with a loud alarm note from the shallow muddy flat there, — with a harsh shrill cry, *phil phil phil* or the like. At first I could not guess what they were, but since concluded that they were the larger yellow-legs. Could this bird have made the sound heard on the 15th? There remained feeding on the mud along the water's edge two peetweet-like birds, but apparently larger and less teetering. I thought they were *T. solitarius*.

Heard the night-warbler *begin* his strain just like an oven-bird! I have noticed that when it drops down into the woods it darts suddenly *one side* to a perch when low.

May 20. P. M. — Up Assabet.

A cloudy afternoon, with a cool east wind, producing a mist. Hundreds of swallows are now skimming close over the river, at its broadest part, where it is shallow and runs the swiftest, just below the Island, for a distance of twenty rods. There are bank, barn, cliff, and chimney swallows, all mingled together and continually scaling back and forth, — a very lively sight. They keep descending or stooping to within a few inches of the water on a curving wing,

without quite touching it, and I suppose are attracted by some small insects which hover close over it. They also stoop low about me as I stand on the flat island there, but I do not perceive the insects. They rarely rise more than five feet above the surface, and a general twittering adds to the impression of sociability. The principal note is the low grating sound of the bank swallow, and I hear the *vit vit* of the barn swallow. The cliff swallow, then, is here. Are the insects in any measure confined to that part of the river? Or are they congregated for the sake of society? I have also in other years noticed them over another swift place, at Hubbard's Bath, and also, when they first come, in smaller numbers, over the still and smooth water under the lee of the Island wood. They are thick as the gnats which perhaps they catch. Swallows are more confident and fly nearer to man than most birds. It may be because they are more protected by the sentiment and superstitions of men.

The season is more backward on account of the cloudy and rainy weather of the last four or five days and some preceding. The *Polygonatum pubescens*, not quite. The red oak is not out.

Hear a quail whistle.

I notice that the sugar maple opposite Barrett's does not bloom this year, nor does the canoe birch by the Hemlocks bear sterile catkins. Perhaps they more or less respect the alternate years.

3.30 P. M. — To Brister's Hill.

Going along the deep valley in the woods, just be-

fore entering the part called Laurel Glen, I heard a noise, and saw a fox running off along the shrubby side-hill. It looked like a rather small dirty-brown fox, and very clumsy, running much like a woodchuck. It had a dirty or dark brown tail, with very little white to the tip. A few steps further I came upon the remains of a woodchuck, yet warm, which it had been eating. Head, legs, and tail, all remained, united by the skin, but the bowels and a good part of the flesh were eaten. This was evidently a young fox, say three quarters grown, or perhaps less, and appeared as full as a tick. There was a fox-hole within three rods, with a very large sand-heap, several cartloads, before it, much trodden. Hearing a bird of which I was in search, I turned to examine it, when I heard a bark behind me, and, looking round, saw an old fox on the brow of the hill on the west side of the valley, amid the bushes, about ten rods off, looking down at me. At first it was a short, puppy-like bark, but afterward it began to bark on a higher key and more prolonged, very unlike a dog, a very ragged half-screaming *bur-ar-r-r*. I proceeded along the valley half a dozen rods after a little delay (the fox being gone), and then looked round to see if it returned to the woodchuck. I then saw a full-grown fox, perhaps the same as the last, cross the valley through the thin low wood fifteen or twenty rods behind me, but from east to west, pausing and looking at me anxiously from time to time. It was rather light tawny (not fox-colored) with dusky-brown bars, and looked very large, wolf-like. The full-grown fox stood much higher on its legs and was longer, but

the body was apparently not much heavier than that of the young. Going a little further, I came to another hole, and ten feet off was a space of a dozen square feet amid some little oaks, worn quite bare and smooth, apparently by the playing of the foxes, and the ground close around a large stump about a rod from the hole was worn bare and hard, and all the bark and much of the rotten wood was pawed or gnawed off lately. They had pawed a deep channel about one and in between the roots, perhaps for insects. There lay the remains of another woodchuck, now dry, the head, skin, and legs being left, and also part of the skin of a third, and the bones of another animal, and some partridge feathers. The old foxes had kept their larder well supplied. Within a rod was another hole, apparently a back door, having no heap of sand, and five or six rods off another in the side of the hill with a small sand-heap, and, as far down the valley, another with a large sand-heap and a back door with none. There was a well-beaten path from the one on the side-hill five or six rods long to one in the valley, and there was much blackish dung about the holes and stump and the path. By the hole furthest down the valley was another stump, which had been gnawed (?) very much and trampled and pawed about like the other. I suppose the young foxes play there. There were half a dozen holes or more, and what with the skulls and feathers and skin and bones about, I was reminded of Golgotha. These holes were some of them very large and conspicuous, a foot wide vertically, by eight or ten inches, going into the side-hill with a curving stoop,

and there was commonly a very large heap of sand before them, trodden smooth. It was a sprout-land valley, cut off but a year or two since.

As I stood by the last hole, I heard the old fox bark, and saw her (?) near the brow of the hill on the northwest, amid the bushes, restless and anxious, overlooking me a dozen or fourteen rods off. I was, on doubt, by the hole in which the young were. She uttered at very short intervals a prolonged, shrill, screeching kind of bark, beginning lower and rising to a very high key, lasting two seconds; a very broken and ragged sound, more like the scream of a large and angry bird than the bark of a dog, trilled like a piece of vibrating metal at the end. It moved restlessly back and forth, or approached nearer, and stood or sat on its haunches like a dog with its tail laid out in a curve on one side, and when it barked it laid its ears flat back and stretched its nose forward. Sometimes it uttered a short, puppy-like, snappish bark. It was not fox-colored now, but a very light tawny or wolf-color, dark-brown or dusky beneath in a broad line from its throat; its legs the same, with a broad dusky perpendicular band on its haunches and similar ones on its tail, and a small whitish spot on each side of its mouth. There it sat like a chieftain on his hills, looking, methought, as big as a prairie wolf, and shaggy like it, anxious and even fierce, as I peered through my glass. I noticed, when it withdrew, — I too withdrawing in the opposite direction, — that as it had descended the hill a little way and wanted to go off over the pinnacle without my seeing which way it went, it ran one side about ten feet, till it was behind

a small white pine, then turned at a right angle and ascended the hill directly, with the pine between us. The sight of it suggested that two or three might attack a man. The note was a shrill, vibrating scream or cry; could easily be heard a quarter of a mile. How many woodchucks, rabbits, partridges, etc., etc., they must kill, and yet how few of them are seen! A very wolfish color. It must have been a large fox, and, if it is true that the old are white on the sides of the face, an old one. They evidently used more than a half dozen holes within fifteen rods. I withdrew the sooner for fear by his barking he would be betrayed to some dog or gunner.

It was a very wild sight to see the wolf-like parent circling about me in the thin wood, from time to time pausing to look and bark at me. This appears to be nearest to the cross fox of Audubon, and is considered a variety of the red by him and most others, not white beneath as the red fox of Harlan. Emmons says of the red fox, "In the spring the color appears to fade," and that some are "pale yellow," but does not describe minutely. This was probably a female, for Bell says of the English fox that the female "loses all her timidity and shyness when suckling her young;" also that they are a year and a half in attaining their full size.[1]

Hear the pepe. See tanagers, male and female, in

[1] I find afterward three or four more fox-holes near by, and see where they have sat on a large upturned stump, which had heaved up earth with it. Many large pieces of woodchuck's skin about these holes. They leave the head and feet. A scent of carrion about the holes.

the top of a pine, one red, other yellow, from below. We have got to these high colors among birds.

Saw in the street a young cat owl, one of two which Skinner killed in Walden Woods yesterday. It was almost ready to fly, at least two and a half feet in alar extent; tawny with many black bars, and darker on wings. Holmes, in Patent Office Report, says they "pair early in February." So I visited the nest. It was in a large white pine close on the north side of the path, some ten rods west of the old Stratton cellar in the woods. This is the largest pine thereabouts, and the nest is some thirty-five feet high on two limbs close to the main stem, and, according to Skinner, was not much more than a foot across, made of small sticks, nearly flat, "without fine stuff!" There were but two young. This is a path which somebody travels every half-day, at least, and only a stone's throw from the great road. There were many white droppings about and large rejected pellets containing the vertebræ and hair of a skunk. As I stood there, I heard the crows making a great noise some thirty or forty rods off, and immediately suspected that they were pestering one of the old owls, which Skinner had not seen. It proved so, for, as I approached, the owl sailed away from amidst a white pine top, with the crows in full pursuit, and he looked very large, stately, and heavy, like a seventy-four among schooners. I soon knew by the loud cawing of the crows that he had alighted again some forty rods off, and there again I found him perched high on a white pine, the large tawny fellow with black dashes and large erect horns. Away he goes again, and the crows after him.

May 21. P. M. — To Boulder Field.

Horse-chestnut in bloom. *Aetæa spicata* var. *rubra* will bloom, apparently, in four or five days. It is now fifteen inches high. Lilac in bloom. Pratt shows me what I take to be *Genista tinctoria* (not budded) from the Boulder Field. It has leafed; when? Also a ranunculus from his land, — which has been out how long? — which is very near to *R. repens*, but has small flowers, petals less than the calyx, and leaves, methinks, more divided, but I did not see it open. It may be a variety of *repens*.[1]

His daughter has found in bloom: huckleberry on the 19th; *Viola pubescens*, 16th; *Geranium maculatum*, 18th. I notice that the old indigo-bird path behind Pratt's is for some distance distinctly defined by young birches, three or four feet high, which are now clothed with tender leaves before the young oaks, etc., on each side. They are especially thick in the ruts, while there are but few here and there in the sprout-land generally. I suspect that the seed was blown and lodged there in the winter.

E. Hoar saw *Silene Pennsylvanica* out in Lincoln today, in a warm cleft of a rock; also *Cerasus pumila* between here and Newton.

May 22. *Saturday*. Ed. Emerson brings me the egg of a hawk, dirty bluish-white,[2] just found, with three other eggs not much developed, in a nest on the ground. Probably a hen-harrier's.

[1] When I look May 29th, the flower open is of usual size and true *R. repens*.

[2] *Vide* May 30th.

P. M. — By cars to Worcester, on way to New York.

We have had much rainy weather for about a week, and it has just cleared up. I notice, as I glide along, that the sun coming out shines brightly on smooth waters, ponds, and flooded meadows raised by the rain, and is reflected from the new lily pads, which most now first generally notice, spread out on the surface, the foul weather having prevented our observing their growth. Something like this annually occurs. After this May storm the sun bursts forth and is reflected brightly in some placid hour from the new leaves of the lily spread out on the surface in the ponds and pools raised [by] the rain, and we seem to have taken a long stride into summer. So was it also in a former geological age, when water and water-plants prevailed and before man was here to behold them. The sun was then reflected from the lily pad after the May storm as brightly as now.

May 23. In Worcester.

5 A. M. — Walk with Blake, Brown, and Rogers to Quinsigamond Pond, carrying our breakfast. Paddled up the pond northerly three quarters of a mile from the bridge, and lunched in Shrewsbury on the east side. See some quite fresh frog-spawn of the dark kind, like the *Rana palustris*, for instance. Cross and ascend Wigwam Hill. Krigia and comandra out there. Brown thrasher's nest on ground, under a small tree, with four eggs.

Found in the water, eight or ten inches deep, just behind the Lake House, a nasturtium not quite open, which I think must be a variety of the horse-radish (*N. Armoracia*). Yet *such* a variety is not described by

Gray, for the immersed stem leaves were all narrowly dissected and pinnate (*vide* pressed specimen), and I saw similar ones in the streets in Worcester in dry ground. The lowest portion — for I had not the root — had the true horse-radish taste. It seemed to be the result of its growing at some time in water. Has the *N. lacustre* the common horse-radish taste?

A little south of the Boston and Worcester turnpike, and six rods from the west side of the pond, I saw a chestnut about eighteen inches in diameter which was struck by lightning in the night some ten days ago. There was left standing only a splinter of the stump, some seven feet high, with the main limbs fallen upon and around it. The bark and thin slivers or strips of the wood had been cast to a dozen rods around in all directions, the ground being strewn with them, and some rested on the top of an adjacent wood[-pile]. Also one or two large limbs were thrown to a distance. But what was most remarkable and peculiar, there was a trench somewhat more than two rods long, five feet wide at top, and more than two feet deep, leading perfectly straight from the foot of the tree toward the pond, large old roots being burst through, in the gravelly soil, and masses of the earth cast a rod each way, yet most of the dirt formed a bank to the trench. It would have taken an Irishman at least three hours to have dug this. Then, after an interval of three or four rods, where the ground was a little higher, the trench reappeared at the water's edge, though quite short there, exactly in the line of the first ditch continued, and there some two cartloads of gravelly soil were thrown out, and the water stood in it.

I counted in all nine places within eight or ten rods along the water's edge, or six or eight rods from the tree, where it had made a short furrow in the ground; and in some cases there were slight furrows here and there between these and the tree, as if the lightning had diverged in rays from the base of the tree, perhaps (?) at first along the roots to the pond. Did it pass *through* the ground when it did not break the surface? The bark was not so much stripped off as I have seen, but the wood was finely splintered.

May 24. *Monday.* To New York by railroad.

All through Connecticut and New York the white involucres of the cornel (*C. Florida*), recently expanded, some of them reddish or rosaceous, are now conspicuous. It is not quite expanded in Concord. It is the most showy indigenous tree now open. (One plant at Staten Island on the 25th had but just begun to *flower*, *i. e.* the true flowers to open.) After entering the State of New York I observed, now fully in bloom, what I call the *Viburnum prunifolium*, looking very like our *V. Lentago* in flower at a little distance. It is thorny, as they told me at Staten Island, and the same I dealt with at Perth Amboy, and is insufficiently described. It grows on higher and drier ground than our *V. nudum*, but its fruit, which is called "nanny berries," resembles that rather than the *V. Lentago*. It shows now rich, dense, rounded masses of white flowers; *i. e.*, the surface of the bushes makes the impression of regular curves or convex masses of bloom, bearing a large proportion to the green leaves. The pink azalea, too, not yet out at home, is

generally out, with the cornel. (I see it also next day at Staten Island.)

I saw a musquash swimming across a pool, I think after entering upon Manhattan Island!

In the evening, looked at the aquarium at Barnum's. The glass boxes with nothing but water (labelled fresh or salt) and pebbles seemed sufficiently interesting. There were breams only two inches long, probably hatched only last year. The sea-anemones were new and interesting to me. The ferns, etc., under glass a fine parlor ornament.

May 25. Visited the Egyptian Museum.

The chariot wheel might have been picked out of a ditch in Carlisle, and the infant's shoe have been found with it.

P. M. — To Staten Island.

See an abundance of *Ranunculus abortivus* in the wood-path behind Mr. E.'s house, going to seed and in bloom. The branches are fine and spreading, about eight or ten inches high. (*Vide* pressed plants.) Also some *R. recurvatus;* and, well out, what appears to be *Thaspium trifoliatum* (?) in flower, in path to house. (*Vide* pressed.) Potatoes just hoed; ours not fairly up.

May 26. 3 P. M. — Return to Boston.

May 27. At Boston, Cambridge, and Concord.

De Kay describes the *Esox fasciatus,* which is apparently mine of May 11th. As I count, the rays are the same in number, *viz.* "P. 13, V. 9, D. 14, A. 13, C. 20."

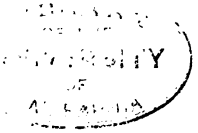
He says it is from six to eight inches long and abundant in New York; among other things is distinguished by "a muddy tinge of the roundish pectoral, abdominal, and ventral fins; and by a broad concave or lunated tail." I do not observe the peculiarity in the tail in mine, now it is in spirits.

Ed. Emerson shows me an egg of a bittern (*Ardea minor*) from a nest in the midst of the Great Meadows, which four boys found, scaring up the bird, last Monday, the 24th. It was about a foot wide on the top of a tussock, where the water around was about one foot deep. I will measure the egg.[1] They were a little developed. Also an egg of a turtle dove, one of two in a nest in a pitch pine, about six feet from the ground, in Sleepy Hollow Cemetery, by the side of a frequented walk, on a fork on a nearly horizontal limb. The egg is milk-white, elliptical, one and three sixteenths inches long by seven eighths wide.

May 28. I get the nest of the turtle dove above named, it being deserted and no egg left. It appears to have been built on the foundation of an old robin's nest and consists of a loose wisp of straw and pinweed, the seedy ends projecting, ten inches long, laid across the mud foundation of the robin's nest, with a very slight depression. Very loose and coarse material is artificially disposed, without any lining or architecture. It was close to a frequented path of the cemetery and within reach of the hand.

[1] It is clay-colored, one and seven eighths inches long by one and nine sixteenths, about the same size at each end.

A Turtle Dove's Nest



Hear the wood pewee.

P. M. — By boat to Great Meadows to look for the bittern's nest.

The *Cornus florida* involucres are partly expanded, but not yet very showy. *Salix nigra* apparently one day in one place. The *Salix pedicellaris*, which abounds in the Great Meadows, is a peculiar and rather interesting willow, some fifteen inches high and scarcely rising above the grass even now. With its expanded reddish ovaries, it looks like the choke-berry in bud at a little distance. The *Ranunculus Purshii* is now abundant and conspicuous in river.

I see common in these meadows what appears to be that coarse grass growing in circles, light or yellowish green, with dense wool-grass-like heads and almost black involucres, just begun to bloom. Is it the *Scirpus sylvaticus* var. *atrovirens*? (*Vide* pressed.) As I look far over the meadow, which is very wet, — often a foot of water amid the grass, — I see this yellowish green interspersed with irregular dark-green patches where it is wettest, just like the shadow of a cloud, — and mistook it for that at first. *That* was a dark-green and fine kind of sedge. These various shades of grass remind me of June, now close at hand. From time to time I hear the sound of the bittern, concealed in the grass, indefinitely far or near, and can only guess at the direction, not the distance. I fail to find the nest.

I come, in the midst of the meadow, on two of the *Emys meleagris*, much larger than I have found before. Perhaps they are male and female, the one's sternum being decidedly depressed an eighth of an inch, the

other's not at all. They are just out of the water, partly concealed by some withered grass, and hiss loudly and run out their long necks very far and struggle a good deal when caught. They continue to scratch my hand in their efforts to escape as I carry them, more than other turtles do. The dorsal shield of each is just seven inches long; the sternum of what appears to be the female is about an eighth inch shorter, of the male near a quarter of an inch longer, yet in both the projection of the sternum is chiefly forward. Breadth of shell in the male four and seven eighths, of female four and a half, in middle, but the female widens a little behind. Height of each about two and three quarters inches. The smoothish dark-brown shells, high, regularly rounded, are very thickly but not conspicuously spotted (unless in water) with small oval or elongated yellow spots, as many as fifty or sixty to a scale, and more or less raying from the origin of the scale, becoming larger and horn-colored on the marginal scales especially of *one*. The thickly and evenly distributed yellow marks of the head and neck correspond to those of the shell pretty well. They are high-backed turtles. The sternum is horn-color, with a large dark or blackish spot occupying a third or more of the rear outer angle of each scale. The throat is clear light-yellow and much and frequently exposed. Tail, tapering and sharp. The claws are quite sharp and perfect. One closes its forward valve to within an eighth of an inch, but the posterior not so much, and evidently they are not inclined to shut up close, if indeed they can at this season, or at all. The sternum

of the male, notwithstanding the depression, curves upward at each extremity much more than the female's. They run out their heads remarkably far and have quite a harmless and helpless expression, yet, from the visible length of neck, the more snake-like. About the size of the wood tortoise. Very regularly and smoothly rounded shells. Voided many fragments of common snail-shells and some insect exuviæ.

Hear for a long time, as I sit under a willow, a summer yellowbird sing, without knowing what it is. It is a rich and varied singer with but few notes to remind me of its common one, continually hopping about.

See already one or two (?) white maple keys on the water. Saw the mouse-ear going to seed in Worcester the 23d. The red actæa is fully expanded and probably has been open two or three days, but there will be no pollen till to-morrow. What kind of cherry tree is that, now rather past prime, wild-red-cherry-like, if not it, between the actæa and river near wall? Some ten inches in diameter. Hear the night[hawk?] and see a bat to-night. The earliest cinnamon fern, apparently not long.

E. Hoar finds the *Eriophorum vaginatum* at Ledum Swamp, with lead-colored scales; how long?

May 29. P. M. — To Bateman's Pond *via* Pratt's.

Buttonwood, one tree, not for two or three days. *Rubus triflorus*, well out, at Calla Swamp, how long? Calla apparently in two or three, or three or four days, the very earliest. *Arethusa bulbosa*, well out. *Cornus*

Canadensis blooms apparently with *C. florida;* not *quite* yet. I mistook dense groves of little barberries in the droppings of cows in the Boulder Field for apple trees at first. So the cows eat barberries, and help disperse or disseminate them exactly as they do the apple! That helps account for the spread of the barberry, then. See the genista, winter-killed at top, some seven or eight rods north of the southernmost large boulder in the Boulder Field. Cannot find any large corydalis plants where it has been very plenty. A few of the *Cornus florida* buds by the pond have escaped after all.

Farmer describes an animal which he saw lately near Bateman's Pond, which he thought would weigh fifty or sixty pounds, color of a she fox at this season, low but very long, and ran somewhat like a woodchuck. I think it must have been an otter, though they are described as dark glossy-brown.

May 30. Hear of lady's-slipper seen the 23d; how long? I saw the *Nuphar advena* above water and yellow in Shrewsbury the 23d.

P. M. — To hen-harrier's nest and to Ledum Swamp.

Edward Emerson shows me the nest which he and another discovered. It is in the midst of the low wood, sometimes inundated, just southwest of Hubbard's Bath, the island of wood in the meadow. The hawk rises when we approach and circles about over the wood, uttering a note singularly like the common one of the flicker. The nest is in a more bushy or open place in this low wood, and consists of a large mass of

sedge and stubble with a very few small twigs, as it were accidentally intermingled. It is about twenty inches in diameter and remarkably flat, the slight depression in the middle not exceeding three quarters of an inch. The whole opening amid the low bushes is not more than two feet in diameter. The thickness of it raises the surface about four inches above the ground. The inner and upper part is uniformly rather fine and pale-brown sedge. There are two dirty, or rather dirtied, white eggs left (of four that were), one of them one and seven tenths inches long, and not "spherical," as Brewer says, but broad in proportion to length.[1]

Ledum, one flower out, but perhaps if Pratt had not plucked some last Sunday it might have bloomed here yesterday? It is decidedly leafing also. *Andromeda Polifolia* by the ditch well out, how long? I perceive the turpentine scent of the ledum in the air as I walk through it.

As I stand by the riverside some time after sundown, I see a light white mist rising here and there in wisps from the meadow, far and near, — less visible within a foot of me, — to the height of three or four or ten feet. It does not rise generally and evenly from every part of the meadow, but, as yet, over certain spots only, where there is some warm breath of the meadow turned into cloud.

May 31. A. M. — To Island.

[1] Another is one and seven eighths inches long by one and a half inches. *Vide* the last (which was addled).

Choke-cherry, a day or two. *Cornus florida*, not yet for two or three days. I saw some in Connecticut with involucres much more rosaceous than ours. A yellowbird's nest of that grayish milkweed fibre, one egg, in alder by wall west of Indian burying(?)-ground.

P. M. — To Laurel Glen.

I see, running along on the flat side of a railroad rail on the causeway, a wild mouse with an exceedingly long tail. Perhaps it would be called the long-tailed meadow mouse. It has no white, only the feet are light flesh-color; but it is uniformly brown as far as I can see, — for it rests a long time on the rail within a rod, — but when I look at it from behind in the sun it is a very tawny almost golden brown, quite handsome. It finally runs, with a slight hop, — the tarsus of the hind legs being very long while the fore legs are short and its head accordingly low, — down the bank to the meadow.

I saw on the 29th *white Viola pedata*, and to-day a white *V. cucullata*.

There were severe frosts on the nights of the 28th and 29th, and now I see the hickories turned quite black, and in low ground the white oak shoots, though they do not show black in drying. Also many ferns are withered and black and some *Prinos lævigatus* tips, etc.

I find a chewink's nest with four eggs (fresh) on the side-hill at Jarvis's wood-lot, twenty feet below woodchuck's hole at canoe birch. The nest is first of withered leaves, then stubble, thickly lined with withered grass

and partly sheltered by dead leaves, shoved [?] up a huckleberry bush.

There was a slight sea-turn, the wind coming cool and easterly this morning, which at first I mistook for the newly leafing deciduous trees investing the evergreens, which is a kind of sea-turn in harmony with the other. I remember that the stage-drivers riding back and forth daily from Concord to Boston and becoming weather-wise perforce, often meeting the sea-breeze on its way into the country, were wont to show their weather wisdom by telling anxious travellers that it was nothing but a sea-turn.

At 5 P. M., go to see a gray squirrel's nest in the oak at the Island point. It is about fifteen feet from the ground, — the entrance, — where a limb has been broken off, and the tree is hollow above and below. One young one darted past downward under my face, with the speed of a bird. There is much short brown dung about, and a smell of urine, and the twigs around have been gnawed.

Does not the voice of the toad along the river sound differently now from what it did a month ago? I think it is much less sonorous and ringing, a more croaking and inquisitive or *qui vive* sound. Is it not less prolonged also?

XI

JUNE, 1858

(ÆT. 40)

June 2. 8.30 A. M. — Start for Monadnock.

Between Shirley Village and Lunenburg, I notice, in a meadow on the right hand, close to the railroad, the *Kalmia glauca* in bloom, as we are whirled past. The conductor says that he has it growing in his garden. Blake joins me at Fitchburg. Between Fitchburg and Troy saw an abundance of wild red cherry, now apparently in prime, in full bloom, especially in burnt lands and on hillsides, a small but cheerful lively white bloom.

Arrived at Troy Station at 11.5 and shouldered our knapsacks, steering northeast to the mountain, some four miles off, — its top. It is a pleasant hilly road, leading past a few farmhouses, where you already begin to snuff the mountain, or at least up-country air. By the roadside I plucked, now apparently in prime, the *Ribes Cynosbati*, rather downy leaved, and, near by, the same with smooth berries. I noticed, too, the *Salix lucida*, by the roadside there on high land; the *S. rostrata*, etc., were common.

Almost without interruption we had the mountain in sight before us, — its sublime gray mass — that antique, brownish-gray, Ararat color. Probably these crests of the earth are for the most part of one color in all lands,

that gray color of antiquity, which nature loves; color of unpainted wood, weather-stain, time-stain; not glaring nor gaudy; the color of all roofs, the color of things that endure, and the color that wears well; color of Egyptian ruins, of mummies and all antiquity; baked in the sun, done brown. Methought I saw the same color with which Ararat and Caucasus and all earth's brows are stained, which was mixed in antiquity and receives a new coat every century; not scarlet, like the crest of the bragging cock, but that hard, enduring gray; a terrene sky-color; solidified air with a tinge of earth.[1]

The red elder was in full bloom by the road, apparently in prime.

We left the road at a schoolhouse, and, crossing a meadow, began to ascend gently through very rocky pastures. Previously an old man, a mile back, who lived on a hilltop on the road, pointed out the upper corner of his pasture as a short way up. Said he had not been up for seven years and, looking at our packs, asked, "Are you going to carry them up?" "Well," said he, with a tone half of pity and half regret, adding, "I shall never go up again."

Here, at the base, by the course of a rocky rill, where we paused in the shade, in moist ground, I saw the *Tiarella cordifolia*, abundant and apparently in prime, with its white spike sometimes a foot and more high; also the leaves of the *Geranium Robertianum*, emitting their peculiar scent, with the radical reddish tinge, not yet budded. The cress in the water there was quite

[1] Best view of mountain about two and a half miles this side of summit.

agreeable to our taste, and methinks would be good to eat fresh with bread.

The neighboring hills began to sink, and entering the wood we soon passed Fassett's shanty, — he so busily at work inside that he did not see us, — and we took our dinner by the rocky brook-side in the woods just above. A dozen people passed us early in the afternoon, while we sat there, men and women on their way down from the summit, this suddenly very pleasant day after a louring one having attracted them. We met a man (apparently an Indian or Canadian half-breed) and a boy, with guns, who had been up after pigeons but only killed five crows.

Thereabouts first I noticed the *Ribes prostratum*, abundantly in bloom, apparently in prime, with its pretty erect racemes of small flowers, sometimes purplish with large leaves. There, too, the *Trillium erythrocarpum*, now in prime, was conspicuous, — three white lanceolate waved-edged petals with a purple base. This the handsomest flower of the mountain, coextensive with the wooded sides. Also the *Viburnum lantanoides*, apparently in prime, with its large and showy white outer florets, reminding me by its marginal flowering of the tree-cranberry, coextensive with last; and *Uvularia grandiflora*, not long begun to bloom. Red elder-berry not open, apparently, there; and *Amelanchier Canadensis* var. *Botryapium* not long in bloom.

Having risen above the dwarfish woods (in which mountain-ash was very common), which reached higher up along this ravine than elsewhere, and nearly all the visitors having descended, we proceeded to find a place

for and to prepare our camp at mid-afternoon. We wished it to be near water, out of the way of the wind, which was northwest, and of the path, and also near to spruce trees for a bed. (There is a good place if you would be near the top within a stone's throw of the summit, on the north side, under some spruce trees.) We chose a sunken yard in a rocky plateau on the southeast side of the mountain, perhaps half a mile from the summit, by the path, a rod and a half wide by many more in length, with a mossy and bushy floor about five or six feet beneath the general level, where a dozen black spruce trees grew, though the surrounding rock was generally bare. There was a pretty good spring within a dozen rods, and the western wall shelved over a foot or two. We slanted two scraggy spruce trees, long since bleached, from the western wall, and, cutting many spruce boughs with our knives, made a thick bed and walls on the two sides to keep out the wind. Then, putting several poles transversely across our two rafters, we covered [them] with a thick roof of spruce twigs, like shingles. The spruce, though harsh for a bed, was close at hand, we cutting away one tree to make room. We crawled under the low eaves of this roof, about eighteen inches high, and our extremities projected about a foot.

Having left our packs here and made all ready for the night, we went up to the summit to see the sun set. Our path lay through a couple of small swamps and then up the rocks. Some forty or fifty rods below the very apex southeast, or quite on the top of the mountain, I saw a little bird flit out from beneath a rock close by the path on the left of it, where there were only very few scattered

dwarf black spruce about, and, looking, I found a nest with three eggs. It was the *Fringilla hyemalis*, which soon disappeared around a projecting rock. It was near by a conspicuous spruce, six or eight feet high, on the west edge of a sort of hollow, where a vista opened south over the precipice, and the path ascended at once more steeply. The nest was sunk in the ground by the side of a tuft of grass, and was pretty deep, made of much fine dry grass or sedge (?) and lined with a little of a delicate bluish hair-like fibre (?) (*q. v.*) two or three inches long. The eggs were three, of a regular oval form, faint bluish-white, sprinkled with fine pale-brown dots, in two of the three condensed into a ring about the larger end. They had apparently just begun to develop. The nest and tuft were covered by a projecting rock. Brewer says that only one nest is known to naturalists. We saw many of these birds flitting about the summit, perched on the rocks and the dwarf spruce, and disappearing behind the rocks. It is the prevailing bird now up there, *i. e.* on the summit. They are commonly said to go to the fur countries to breed, though Wilson says that some breed in the Alleghanies. The New York Reports make them breed on the mountains of Oswego County and the Catskills.[1] This was a quite interesting discovery. They probably are never seen in the surrounding low grounds at this season. The ancestors of this bird had evidently perceived on their flight northward that here was a small piece of arctic region, containing all the conditions they

[1] Prevail in Nova Scotia according to Bryant and Cabot. [Dr. Brewer's statement, quoted above, must refer to the snow *bunting*, not to the snowbird.]

require, — coolness and suitable food, etc., etc., — and so for how long have builded here. For ages they have made their home here with the *Arenaria Grœnlandica* and *Potentilla tridentata*. They discerned arctic isles sprinkled in our southern sky. I did not see any of them below the rocky and generally bare portion of the mountain. It finds here the same conditions as in the north of Maine and in the fur countries, — Labrador mosses, etc. Now that the season is advanced, migrating birds have gone to the extreme north or gone to the mountain-tops. By its color it harmonized with the gray and brownish-gray rocks. We felt that we were so much nearer to perennial spring and winter.

I observed rabbit's dung commonly, quite to the top and all over the rocky portion, and where they had browsed the bushes. For the last fifteen or twenty rods the ground between the rocks is pretty thickly clothed or carpeted with mountain cranberry and *Potentilla tridentata*, only the former as yet slightly budded, but much lower than this the mountain cranberry is not common. The former grows also in mere seams on the nearly upright sides of rocks, and occasionally I found some of last year's cranberries on the latter, which were an agreeable acid. These were the prevailing plants of a high order on the very summit. There was also on the same ground considerable fine grass,[1] and radical leaves of a sericocarpus-like aster (?),[2] — I saw some withered heads, — springing up commonly, and a little (hardly yet conspicuously budded except in the warmest places)

[1] Was it not *Juncus trifidus*?

[2] Was it not the *Solidago thyrsoidea* of Aug., 1860?

Arenaria Grœnlandica in dense tufts, succulent. There were a few very dwarfish black spruce there, and a very little dry moss, and, on the rocks, many of that small leather-colored lichen, and *Umbilicaria pustulata*, and the two common (?) kinds of cladonia, white and green, between them.[1]

Scarcely, if at all, lower than the above-named plants, grew the *Vaccinium Pennsylvanicum*, also *Pyrus arbutifolia*, very minute and but just budded, and minute mountain-ashes, a few inches high only. From these one may judge what plants, among others, grow far north.

We heard the hylodes peeping from a rain-water pool a little below the summit toward night.

As it was quite hazy, we could not see the shadow of the mountain well, and so returned just before the sun set to our camp. We lost the path coming down, for nothing is easier than to lose your way here, where so little trail is left upon the rocks, and the different rocks and ravines are so much alike. Perhaps no other equal area is so bewildering in this respect as a rocky mountain-summit, though it has so conspicuous a central point.

Notwithstanding the newspaper and egg-shell left by visitors, these parts of nature are still peculiarly unhandselled and untracked. The natural terraces of rock are the steps of this temple, and it is the same whether it rises above the desert or a New England village. Even the inscribed rocks are as solemn as most ancient gravestones, and nature reclaims them with bog and lichens. They reminded me of the grave and pass of Ben Waddi (?). These sculptors seemed to me to court such

[1] *Vide* specimens of Aug., 1860.

alliance with the grave as they who put their names over tombstones along the highway. One, who was probably a blacksmith, had sculptured the emblems of his craft, an anvil and hammer, beneath his name. Apparently a part of the regular outfit of mountain-climbers is a hammer and cold-chisel, and perhaps they allow themselves a supply of garlic also. Certainly you could not hire a stone-cutter to do so much engraving for less than several thousand dollars. But no Old Mortality will ever be caught renewing these epitaphs. It reminds what kinds of steeps do climb the false pretenders to fame, whose chief exploit is the carriage of the tools with which to inscribe their names. For speaking epitaphs they are, and the mere name is a sufficient revelation of the character. They are all of one trade, — stone-cutters, defacers of mountain-tops. "Charles & Lizzie!" Charles carried the sledge-hammer, and Lizzie the cold-chisel. Some have carried up a paint-pot, and painted their names on the rocks.

We returned to our camp and got our tea in our sunken yard. While one went for water to the spring, the other kindled a fire. The whole rocky part of the mountain, except the extreme summit, is strewn with the relics of spruce trees, a dozen or fifteen feet long, and long since dead and bleached, so that there is plenty of dry fuel at hand. We sat out on the brink of the rocky plateau near our camp, taking our tea in the twilight, and found it quite dry and warm there, though you would not have thought of sitting out at evening in the surrounding valleys. It was evidently warmer and drier there than below. I have often perceived the warm air

high on the sides of hills late into the night, while the valleys were filled with a cold damp night air, as with water, and here the air was warmer and drier the greater part of the night. We perceived no dew there this or the next night. This was our parlor and supper-room; in another direction was our wash-room. The chewink sang before night, and this, as I have before observed, is a very common bird on mountain-tops. It seems to love a cool atmosphere, and sometimes lingers quite late with us. And the wood thrush, indefinitely far or near, a little more distant and unseen, as great poets are. Early in the evening the nighthawks were heard to spark and boom over these bare gray rocks, and such was our serenade at first as we lay on our spruce bed. We were left alone with the nighthawks. These withdrawn bare rocks must be a very suitable place for them to lay their eggs, and their dry and unmusical, yet supramundane and spirit-like, voices and sounds gave fit expression to this rocky mountain solitude. It struck the very key-note of the stern, gray, barren solitude. It was a thrumming of the mountain's rocky chords; strains from the music of Chaos, such as were heard when the earth was rent and these rocks heaved up. Thus they went sparking and booming, while we were courting the first access of sleep, and I could imagine their dainty limping flight, circling over the kindred rock, with a spot of white quartz in their wings. No sound could be more in harmony with that scenery. Though common below, it seemed peculiarly proper here. But ere long the nighthawks were stilled, and we heard only the sound of our companion's breathing

or of a bug in our spruce roof. I thought I heard once faintly the barking of a dog far down under the mountain, and my companion thought he heard a bullfrog.

A little after 1 A. M., I woke and found that the moon had risen, and heard some little bird near by sing a short strain of welcome to it, somewhat song-sparrow-like. But every sound is a little strange there, as if you were in Labrador. Before dawn the nighthawks commenced their sounds again, and these sounds were as good as a clock to us, telling how the night got on.

June 3. At length, by 3 o'clock, the signs of dawn appear, and soon we hear the robin and the *Fringilla hyemalis*, — its prolonged jingle, — sitting on the top of a spruce, the chewink, and the wood thrush. Whether you have slept soundly or not, it is not easy to lie abed under these circumstances, and we rose at 3.30, in order to see the sun rise from the top and get our breakfast there. Concealing our blankets under a shelving rock near the camp, we set out.

It was still hazy, and we did not see the shadow of the mountain until it was comparatively short. We did not get the most distant views, as of the Green and White Mountains, while we were there. We carried up fuel for the last quarter of a mile. A *Fringilla hyemalis* seemed to be attracted by the smoke of our fire, and flew quite near to us. They are the prevailing bird of the summit, and perhaps are baited by the crumbs left by visitors. It was flitting about there, and it would sit and sing, on the *top* of a dwarf spruce, the strain I have often heard.

I saw just beneath the summit, and commencing some

fifteen or twenty rods from it, dwarfish *Rhodora Canadensis*, not yet anywhere quite out, much later than in the valley, very common; lambkill; and checkerberry; and, in slightly boggy places, quite dwarfish specimens of *Eriophorum vaginatum*, quite common in similar localities all over the rocky part, six inches high or more. A little water andromeda with it, scarcely out, and Labrador tea, scarcely suggesting flowers. (This I observed only in two or three places on the northerly side.) A viburnum (probably *nudum* or a form of it) was quite common, just begun to leaf, and with nemopanthes, showing its *transparent* leafets not yet expanded, a little behind the other, was quite sizable, especially the latter. These two, with the spruce, the largest shrubs at this height. In the little thickets made by these bushes, grew the two-leaved Solomon's-seal, not nearly out, and *Clintonia borealis*, not budded, though out in the valley. Within the folded leaves of the last, was considerable water, as within the leaves of the seaside goldenrod on the sands of the Cape. *Cornus Canadensis, along* the base of the rocks, not out. Diervilla. And, on the moist ground or in the small bogs, *Lycopodium annotinum*, resembling at first sight the *L. lucidulum*, but running, was very common in boggy places, sometimes forming quite conspicuous green patches.

The above plants of the mountain-top, except perhaps the mountain cranberry, extended downward over the whole top or rocky part of the mountain and were there mingled with a little *Polypodium vulgare;* a peculiar *Amelanchier Canadensis*, apparently variety *oligocarpa*, just begun to bloom, with few flowers, short

roundish petals, and *finely* serrate leaves; red cherry, not out; *Populus tremuliformis*, not common and quite small; small willows, apparently *discolor*, etc., also *rostrata*, and maybe *humilis;* canoe birch and yellow birch, for the most part scrubby, largest in swampy places; meadow-sweet; *Lycopodium clavatum; Amelanchier Canadensis* var. *oblongifolia*, not quite out, a little of it; and also a little very dwarfish hemlock and white pine (two or three feet high); a *little* mayflower and *Chiogenes hispidula.*

We concluded to explore the whole rocky part of the mountain in this wise, to saunter slowly about it, about the height and distance from the summit of our camp, or say half a mile, more or less, first going north from the summit and returning by the western semicircle, and then exploring the east side, completing the circle, and return over the summit at night.

To sum up, these were the *Plants of the Summit, i. e.* within a dozen rods of it: *Potentilla tridentata* (and lower); *Vaccinium Vitis-Idæa;* fine grass;[1] sericocarpus-like radical leaves;[2] *Arenaria Grœnlandica;* dwarf black spruce; a little dry moss; the two kinds of cladonia, white and green, and the small leather-colored lichen of rocks,[3] mingled with the larger *Umbilicaria pustulata.* All these but the *V. Vitis-Idæa* generally dispersed over the rocky part.[4]

[1] Was it not *Juncus trifidus* of August, 1860?

[2] Was it not *Solidago thyrsoidea* of August, 1860?

[3] *U. erosa* (?) or *hyperborea* (?). *Vide* Sept. 21, 1858, and a specimen from Lafayette. *Vide* specimen of August, 1860.

[4] The *Vaccinium Vitis-Idæa* also in patches lower down. *Vide* August, 1860.

Within fifteen or twenty rods of it, or scarcely, if at all, lower than the last: Vaccinium Pennsylvanicum and perhaps the variety *angustifolium* (?); *Pyrus arbutifolia;* mountain-ash. Generally distributed.

Commencing fifteen or twenty rods below it: Rhodora; lambkill; checkerberry; *Eriophorum vaginatum;* water andromeda; Labrador tea; *Viburnum (nudum?);* nemopanthes; two-leaved Solomon's-seal; clintonia; *Cornus Canadensis; Lycopodium annotinum;* diervilla.

Generally lower than the above, on the rest of the bare rocky part, with all of the above: *Ribes prostratum; Polypodium vulgaris; Amelanchier Canadensis* var. *oligocarpa* (?); red cherry; *Populus tremuliformis; Salix* apparently *discolor,* perhaps also *humilis,* certainly *rostrata;* meadow-sweet; canoe birch; yellow birch; *Lycopodium clavatum; Amelanchier oblongifolia;* a little red elder; hemlock; white pine; mayflower; chiogenes.[1]

Did not examine particularly the larger growth of the swamps, but think it was chiefly spruce, white and yellow birch, mountain-ash, etc.

The *Vaccinium Pennsylvanicum* and the *Abies nigra* are among the most prevailing conspicuous plants.

We first descended somewhat toward the north this forenoon, then turned west over a ridge by which some ascend from the north. There are several large ponds not far from the mountain on the north, and I thought there was less forest to be seen on this side than on the south. We crossed one or two now dry watercourses, where, however, judging from the collections of rubbish

[1] Saw the raspberry in '52 and '60.

or drift, much water must have flown at some other season.

Jackson in his map in the Report on the Geology of Massachusetts calls this mountain "mica slate and porphyritic granite," and [says] that the rocks on the summit are "a hard variety of gneiss filled with small crystals of garnets."

We observed that the rocks were remarkably smoothed, almost polished and rounded, and also scratched. The scratches run from about north-northwest to south-southeast. The sides of the rocks often straight, upright walls, several rods long from north to south and five to ten feet high, with a very smooth, rounded edge. There were many of these long, straight, rounded walls of rock, especially on the northwest and west. Some smaller or lower ones were so rounded and smooth as to resemble at a little distance long-fallen trunks of trees. The rocks were, indeed, singularly worn on a great scale. Often a vertical cross-section would show some such profile as this:

as if they had been grooved with a tool of a corresponding edge. There were occasionally conspicuous masses and also veins of white quartz, and very common were bright-purple or wine-colored garnets imbedded in the rock, looking like berries in a pudding. In many parts, as on the southeast plateau especially, the rocks were regularly stratified, and split into regular horizontal slabs about a foot in thickness, projecting one beyond another like steps.

The little bogs or mosses, sometimes only a rod in diameter, are a singular feature. Ordinarily the cla-

donia and other lichens are crackling under your feet, when suddenly you step into a miniature bog filling the space between two rocks and you are at a loss to tell where the moisture comes from. The amount of it seems to be that some spongy moss is enabled to grow there and retain some of the clouds which rest on it. Moisture and aridity are singularly near neighbors to each other up there. The surface is made up of masses of rock more or less smoothed and rounded, or else jagged, and the little soil between is a coarse, gravelly kind, the ruins of the rocks and the decayed vegetation that has grown there. You step unexpectedly from Arabia Petræa, where the dry lichens crackle under your feet, into a miniature bog, say Dismal Swamp, where you suddenly sink a foot in wet moss, and the next step carries you into Arabia Petræa again. In more extensive swamps I slumped through moss to water sometimes, though the bottom was of rock, while a fire would rapidly spread in the arid lichens around. Perhaps the mosses grow in the wettest season chiefly, and so are enabled to retain some moisture through the driest. Plants of the bogs and of the rocks grow close to each other. You are surprised to see a great many plants of bogs growing close to the most barren and driest spots, where only cladonias cover the rocks. Often your first notice of a bog in the midst of the arid waste, where the lichens crackle under your feet, is your slumping a foot into wet moss. Methinks there cannot be so much evaporation going on up there,—witness the water in the clintonia leaves, as in the solidago by the sandy seashore, — and this (which is owing to the coolness),

rather than the prevalence of mist, may account for the presence of this moisture forming bogs.

In a shallow rain-water pool, or rock cistern, about three rods long by one or one and a half wide, several hundred feet below the summit, on the west side, but still on the bare rocky top and on the steepest side of the summit, I saw toad-spawn (black with white bellies), also some very large spawn new to me. There were four or five masses of it, each three or four inches in diameter and of a peculiar light misty bluish white as it lay in the water near the surface, attached to some weed or stick, as usual. Each mass consisted of but few large ova, more than a quarter of an inch in diameter, in which were pale-brown tadpoles flattened out. The outside of the mass when taken up was found to consist of large spherical or rounded gelatinous projections three quarters of an inch wide, and blue in the light and air, while the ova within were greenish. This rain-water pool was generally less than a foot deep, with scarcely a weed in it, but considerable mud concealing its rocky bottom. The spawn was unusually clean and clear. I suspect it to be that of bullfrogs,[1] though not a frog was to be seen; they were probably lurking beneath the rocks in the water at that hour. This pool was bounded on one or two sides by those rounded walls of rock five or six feet high. My companion had said that he heard a bullfrog the evening before. Is it likely that these toads and frogs ever hopped up there? The hylodes peeped regularly toward night each day in a similar pool much nearer the summit. Agassiz might say that

[1] Probably *Rana fontinalis*. *Vide* August, 1860.

they originated on the top. Perhaps they fell from the clouds in the form of spawn or tadpoles or young frogs. I think it more likely that they fell down than that they hopped up. Yet how can they escape the frosts of winter? The mud is hardly deep enough to protect them.

Having reached the neighborhood of our camp again and explored the wooded portion lower down along the path up the mountain, we set out northeast along the east side of the mountain. The southeast part of the mountain-top is an extended broad rocky *almost* plateau, consisting of large flat rocks with small bogs and rain-water pools and easy ascents to different levels. The black spruce tree which is scattered here and there over it, the prevailing tree or shrub of the mountain-top, evidently has many difficulties to contend with. It is generally of a yellowish green, its foliage. The most exposed trees are very stout and spreading close to the rock, often much wider close to the rock than they are high, and these lower, almost their only, limbs completely filling and covering openings between the rocks. I saw one which grew out of a narrow crack in the rock, which was three feet high, five inches in diameter at the ground, and six feet wide on the rock. It was shaped like a bodkin, — the main stem. The spruce commonly grows in clefts of the rocks; has many large limbs, and longer than the tree is high, perhaps, spreading close and flat over the rock in every direction, sometimes eight or ten within a foot of the rock; then, higher up the stem, or midway for three or six feet, though perfectly perpendicular, is quite bare on the north side and commonly smooth, showing no trace of a limb, no stubs, but the

limbs at this height all ray out southward, and the top is crowned with a tuft of tender twigs. This proves the violence of the storms which they have to contend with. Its branches love to run along flat on the rocks, filling the openings between the rocks. It forms dense coverts and forms, apparently, for the rabbits, etc. A single spruce tree of this habit would sometimes make a pretty good shelter, while the rocks on each side were your walls.

As I walked over this plateau, I first observed, looking toward the summit, that the steep angular projections of the summit and elsewhere and the brows of the rocks were the parts chiefly covered with dark-brown lichens, — umbilicaria, etc., — as if they were to grow on the ridge and slopes of a man's nose only. It was the steepest and most exposed parts of the high rocks alone on which they grew, where you would think it most difficult for them to cling. They also covered the more rounded brows on the sides of the mountain, especially the east side, where they were very dense, fine, crisp, and firm, like a sort of shagreen, giving a firm footing or hold to the feet where it was needed. It was these that gave that Ararat-brown color of antiquity to these portions of the mountain, which a few miles distant could not be accounted for compared with the more prevalent gray. From the sky-blue you pass through the misty gray of the rocks, to this darker and more terrene color. The temples of the mountain are covered with lichens, which color the mountain for miles.

The west side descends steeply from the summit, but there is a broad almost plateau on the southeast and east,

not much beneath the summit, with a precipitous termination on the east, and the rounded brows of the last are covered with the above-named lichens. A spur of moderate length runs off northerly; another, but lower, southwesterly; another, much longer, a little higher than the last, southerly; and one longer and higher than these, one or two miles long, northeasterly. As you creep down over those eastern brows to look off the precipice, these rough and rigid lichens, forming a rigid crust, as it were baked, done brown, in the sun of centuries, afford a desirable hand and foot hold.

They seemed to me wild robins that placed their nests in the spruce up there. I noticed one nest. William Emerson, senior, says they do not breed on Staten Island. They do breed at least at Hudson's Bay. They are certainly a hardy bird, and are at home on this cool mountain-top.

We boiled some rice for our dinner, close by the edge of a rain-water pool and bog, on the plateau southeast from the summit. Though there was so little vegetation, our fire spread rapidly through the dry cladonia lichens on the rocks, and, the wind being pretty high, threatened to give us trouble, but we put it out with a spruce bough dipped in the pool.[1] I thought that if it had spread further, it must soon have come to a bog. Though you could hardly tell what was moist and what dry till the fire came to it. Nothing could be drier than the cladonia, which was often adjacent to a mass of moss saturated with moisture.

[1] And wet the ground with it. You cook beside such a moss for the sake of water.

These rain-water pools or cisterns are a remarkable feature. There is a scarcity of bubbling springs, but this water was commonly cool enough in that atmosphere and warm as the day was. I do not know why they were not warmer, for they were shallow and the nights were not cold. Can there be some concealed snow or ice about? Hardly. They are quite shallow, but sometimes four or five rods over and with considerable mud at the bottom at first, decayed lichens, and disintegrated rock. Apparently these were the origin of the bogs, *Eriophorum vaginatum*, moss, and a few other boggy plants springing up in them and gradually filling them; yet, though sometimes filled with sedge (?) or fine grass, and generally the dwarfish *Eriophorum vaginatum* in the moss, they were singularly barren, and, unless they were fairly converted into swamps, contained very little variety. You never have to go far to find water of some kind. On the top, perhaps, of a square half-acre of almost bare rock, as in what we called our wash-room by our camp, you find a disintegrated bog, wet moss alternating with dry cladonia (sign and emblem of dryness in our neighborhood), and water stands in little holes, or if you look under the edges of a boulder there, you find standing water, yet cool to drink.

After dinner we kept on northeast over a high ridge east of the summit, whence was a good view of that part of Dublin and Jaffrey immediately under the mountain. There is a fine, large lake extending north and south, apparently in Dublin, which it would be worth the while to sail on. When on the summit of this, I heard the ring of toads from a rain-pool a little lower

and northeasterly. It carried me back nearly a month into spring (though they are still ringing and copulating in Concord), it sounded so springlike in that clear, fresh air. Descending to that pool we found toads copulating at the bottom of the water.

In one or two places on this side of the mountain, which, as I have said, terminated in an abrupt precipice, I saw bogs or meadows four or six rods wide or more, but with only grass and moss and eriophorum, without bushes, in them, close to the edge of the mountain or precipice, where, if you stood between the meadow and the summit, looking east, there would appear to be a notch in the rim of the cup or saucer on the east and the meadow ready to spill over and run down the mountain

on that side; but when you stood on this notched edge, the descent was seen to be much less precipitous than you had expected. Such spongy mountain bogs, however, are evidently the sources of rivers. Lakes of the clouds when they are clear water. Between this and the northeast spur or ridge was the largest swamp or bog that I saw, consisting, perhaps, of between one and two acres, as I remember. It was a grassy and mossy bog without large bushes, in which you sank a foot, with a great many fallen trees in it, showing their bleached

upper side here and there but almost completely buried in the moss. This must once have been a dense swamp, full of pretty large trees. The trees buried in the moss were much larger than any now standing at this height. The outlet of this, if it had any, must have been northwesterly. This was a wild place enough.

Having ascended the highest part of the northeastern ridge north of this bog, we returned to the summit, first to the ridge of the plateau, and west on it to the summit, crossing a ravine between. I noticed, in many places upon the mountain, sandy or gravelly spaces from a few feet to a rod in diameter, where the thin sward and loam appeared to have been recently removed or swept away. I was inclined to call them scars, and thought of very violent winds and tempests of rain as the cause, perhaps, but do not know how to account for them.

We had thus made a pretty complete survey of the top of the mountain. It is a very unique walk, and would be almost equally interesting to take though it were not elevated above the surrounding valleys. It often reminded me of my walks on the beach, and suggested how much both depend for their sublimity on solitude and dreariness. In both cases we feel the presence of some vast, titanic power. The rocks and valleys and bogs and rain-pools of the mountain are so wild and unfamiliar still that you do not recognize the one you left fifteen minutes before. This rocky region, forming what you may call the top of the mountain, must be more than two miles long by one wide in the middle, and you would need to ramble about it many times before it would begin to be familiar. There may be twenty little swamps

so much alike in the main that [you] would not know whether you had seen a particular one before, and the rocks are trackless and do not present the same point. So that it has the effect of the most intricate labyrinth and artificially extended walk.

This mountain is said in the Gazetteer to extend northeast [and] southwest five miles, by three wide, and the streams on the east to empty into the Contoocook and Merrimack, on the west into the Ashuelot and Connecticut; is 3718 feet high; and, judging from its account, the top was wooded fifty years ago.

We proceeded to get our tea on the summit, in the very place where I had made my bed for a night some fifteen years before. There were a great many insects of various kinds on the topmost rocks at this hour, and among them I noticed a yellow butterfly and several large brownish ones fluttering over the apex.

It was interesting to watch from that height the shadows of fair-weather clouds passing over the landscape. You could hardly distinguish them from forests. It reminded me of the similar shadows seen on the sea from the high bank of Cape Cod beach. There the perfect equality of the sea atoned for the comparatively slight elevation of the bank. We do not commonly realize how constant and amusing a phenomenon this is in a summer day to one standing on a sufficiently elevated point. In the valley or on the plain you do not commonly notice the shadow of a cloud unless you are in it, but on a mountain-top, or on a lower elevation in a plain country or by the seaside, the shadows of clouds flitting over the landscape are a never-failing source of

amusement. It is commonly easy to refer a shadow to its cloud, since in one direction its form is preserved with sufficient accuracy. Yet I was surprised to observe that a long, straggling downy cumulus extending north and south a few miles east of us, when the sun was perhaps an hour high, cast its shadow along the base of the Peterboro Hills, and did not fall on the other side, as I should have expected. It proved the clouds not so high as I supposed. It suggested how with tolerable accuracy you might easily calculate the height of a cloud with a quadrant and a good map of the country; *e. g.*, observe at what distance the shadow of a cloud directly overhead strikes the earth, and then take the altitude of the sun, and you may presume that you have the base and two angles of a right-angled triangle, from which the rest may be calculated; or you may allow for the angle of elevation of the mountain as seen from the place where the shadow falls. Also you might determine the breadth of a cloud by observing the breadth of the shadow at a given distance, etc., etc. Many such calculations would be easy in such a locality. It was pleasant enough to see one man's farm in the shadow of a cloud, — which perhaps he thought covered all the Northern States, — while his neighbor's farm was in sunshine. It was still too hazy to allow of our seeing the shadow of the mountain, so we descended a little before the sun set, but already the hylodes had been peeping for some time.

Again the wood thrush, chewink, etc., sang at eve. I had also heard the song sparrow.

As the sky was more cloudy this evening, we looked out a shelving rock near our camp, where we might take

shelter from the rain in the night if necessary, *i. e.*, if our roof did not prove tight enough. There were plenty of clefts and small caverns where you might be warm and dry. The mosquitoes troubled us a little this night.

Lying up there at this season, when the nighthawk is most musical, reminded me of what I had noticed before, that this bird is crepuscular in its habits. It was heard by night only up to nine or ten o'clock and again just before dawn, and marked those periods or seasons like a clock. Its note very conveniently indicated the time of night. It was sufficient to hear the nighthawk booming when you awoke to know how the night got on, though you had no other evidence of the hour. I did not hear the sound of any beast. There are no longer any wolves to howl or panthers to scream. One man told me that many foxes took refuge from dogs and sportsmen on this mountain.

The plants of cold northern bogs grow on this mountain-top, and even they have a boreal habit here, more dwarfish than such of them as grow in our swamps. The more memorable and peculiar plants of the mountain-top were the mountain cranberry and the *Potentilla tridentata*, the *dwarfish* spruce, *Arenaria Grœnlandica* (not now conspicuous). The *Ribes prostratum*, or fetid currant, was very abundant from quite near the summit to near the base, and its currant-acid fragrance was quite agreeable to me, partly, perhaps, from its relation to the currant of the gardens. You also notice many small weed-like mountain-ashes, six or eight inches high, which, on trying to pull up, you find to be very firmly rooted, having an old and large root out of proportion to

their top. I might also name in this connection not only the blueberry but the very common but dwarfish *Eriophorum vaginatum* and the *Lycopodium annotinum*, also the amelanchier, variety *oligocarpa*. I was not prepared to find vegetation so much later there than below or with us, since I once found blueberries ripe on Wachusett unexpectedly early. However, it was a pleasing lateness, and gives one a chance to review some of his lessons in natural history. On the rocky part, the only plants, as I noticed, which were or had been in bloom were the salix, now generally done; *Ribes prostratum*, in prime; *Eriophorum vaginatum; Vaccinium Pennsylvanicum*, just begun; *Amelanchier oligocarpa*, little, not long; water andromeda, ditto, ditto; and *probably* (?) the populus, birches (?), mayflower, and spruce.

June 4. *Friday*. At 6 A. M. we began to descend. Near the upper edge of the wood, I heard, as I had done in ascending, a very peculiar lively and interesting strain from some bird, which note was new to me. At the same time I caught sight of a bird with a very conspicuous deep-orange throat and otherwise dark, with some streaks along the head. This may have been the Blackburnian warbler, if it was not too large for that, and may have been the singer. We descended or continued along the base of the mountain southward, taking the road to the State Line Station and Winchendon, through the west part of Rindge.

It is remarkable how, as you are leaving a mountain and looking back at it from time to time, it gradually gathers up its slopes and spurs to itself into a regular

whole, and makes a new and total impression. The lofty beaked promontory which, when you were on the summit, appeared so far off and almost equal to it, seen now against the latter, scarcely deepens the tinge of bluish, misty gray on its side. The mountain has several spurs or ridges, bare and rocky, running from it, with a considerable depression between the central peak and them; *i. e.*, they attain their greatest height half a mile or more from the central apex. There is such a spur, for instance, running off southward about a mile. When we looked back from four or five miles distant on the south, this, which had appeared like an independent summit, was almost totally lost to our view against the general misty gray of the side of the principal summit. We should not have suspected its existence if we had not just come from it, and though the mountain ranges northeasterly and southwesterly, or not far from north and south, and is much the longest in that direction, it now presented a pretty regular pyramidal outline with a broad base, as if it were broadest east and west. That is, when you are on the mountain, the different peaks and ridges appear more independent; indeed, there is a bewildering variety of ridge and valley and peak, but when you have withdrawn a few miles, you are surprised at the more or less pyramidal outline of the mountain and that the lower spurs and peaks are all subordinated to the central and principal one. The summit appears to rise and the surrounding peaks to subside, though some new prominences appear. Even at this short distance the mountain has lost most of its rough and jagged

outline, considerable ravines are smoothed over, and large boulders which you must go a long way round make no impression on the eye, being swallowed up in the air.

We had at first thought of returning to the railroad at Fitzwilliam, passing over Gap Mountain, which is in Troy and Fitzwilliam quite near Monadnock, but concluded to go to Winchendon, passing through the western part of Rindge to the State Line Station, the latter part of the road being roundabout. We crossed the line between Jaffrey and Rindge three or four miles from the mountain. Got a very good view of the mountain from a high hill over which the road ran in the western part of Rindge.

But the most interesting part of this walk was the three miles along the railroad between State Line and Winchendon Station. It was the best timbered region we saw, though its trees are rapidly falling. The railroad runs very straight for long distances here through a primitive forest. To my surprise I heard the *tea-lea* of the myrtle-bird [1] here, as in Maine, and suppose that it breeds in this primitive wood. There was no house near the railroad but at one point, and then a quarter of a mile off. The red elder was in full bloom and filled the air with its fragrance. I saw some of the handsomest white pines here that I ever saw, — even in Maine, — close by the railroad. One by which I stood was at least three and a half feet in diameter at two feet from the ground, and, like several others about it, rose perfectly straight without any kind of limb to the height of sixty feet at least. What struck

[1] White-throat, probably.

me most in these trees, as I was passing by, was not merely their great size, for they appeared less than they were, but their perfect perpendicularity, roundness, and apparent smoothness, tapering very little, like artificial columns of a new style. Their trunks were so very round that for that reason they appeared smoother than they were, marked with interrupted bands of light-colored lichens. Their regular beauty made such an impression that I was forced to turn aside and contemplate them. They were so round and perpendicular that my eyes slid off, and they made such an impression of finish and even polish as if they had had an enamelled surface. Indeed they were less rough than I might have expected. Beneath them grew the *Trillium pictum* and clintonia, both in bloom.

For last expedition to Monadnock, *vide* September, 1852.

I find the *Cornus florida* out in my pitcher when I get home June 4th, though it was not out on Island May 31st, and it is well out on Island when I look June 6th. I will say, therefore, that it opened June 3d.

June 5. A. M. — Surveying a blueberry and maple swamp belonging to Thomas Brooks in the northeast part of Lincoln, burned over in fall of '57. The fire spread across a ditch about four feet wide, catching the dry grass. The maples are killed part way or entirely round, near the ground, as you find on cutting the bark, being most protected on the inside of a clump toward each other, but less and less as you try higher up. Yet, generally, they have leaved out. Will they,

when thus girdled, live more than one year? The effect on the alders has been that the bark for a foot or two next the ground is now in loose curls turned back or outward, showing the yellowish wood and yellowish inner side of the bark, evidently owing to the drying and contracting of the outside. The principal loss appears to have been of blueberries. Brooks *says* he has got twenty-five (??) bushels there in a year.

P. M. — Surveying, for Warner, wood bought of John Brown near Concord line.

I now see a painted turtle in a rut, crossing a sandy road. They are now laying, then. When they get into a rut they find it rather difficult to get out, and, hearing a wagon coming, they draw in their heads, lie still, and are crushed.

Clasping hound's-tongue in garden.

Can our second gooseberry in garden be the *R. rotundifolium?*

June 6. P. M. — *Cornus florida* at Island well out, say the 3d. I hear of linnæa out in a pitcher and probably (?) in woods.

Go to Painted-Cup Meadow *via* Assabet Bath.

See three or four *Emys insculpta* about, making their holes in the gravelly bank south of Assabet Bath, and a few holes which must have been made a day or two, probably by the same. Golden senecio is not uncommon now. Am surprised to find that the buckbean flowers are withered, being killed by the recent frosts. Yellow Bethlehem-star.

Edith Emerson has found, in the field (Merriam's) just south of the Beck Stow pine grove, *Lepidium campestre*, which may have been out ten days.

June 7. P. M. — To Walden.

Warm weather has suddenly come, beginning yesterday. To-day it is yet warmer, 87° at 3 P. M., compelling me to put on a thin coat, and I see that a new season has arrived. June shadows are moving over waving grass-fields, the crickets chirp uninterruptedly, and I perceive the agreeable acid scent of high blueberry bushes in bloom. The trees having leaved out, you notice their rounded tops, suggesting shade. The nighthawk sparks and booms over arid hillsides and sprout-lands.

It is evidence enough against crows and hawks and owls, proving their propensity to rob birds' nests of eggs and young, that smaller birds pursue them so often. You do not need the testimony of so many farmers' boys when you can see and hear the small birds daily crying "Thief and murder" after these spoilers. What does it signify, the kingbird, blackbird, swallow, etc., etc., pursuing a crow? They say plainly enough, "I know you of old, you villain; you want to devour my eggs or young. I have often caught you at it, and I'll publish you now." And probably the crow pursuing the fish hawk and eagle proves that the latter sometimes devour their young.

The *Salix tristis* is now generally going or gone to seed. *Oxalis violacea* in garden.

I see toads copulating and toad-spawn freshly laid

in the Wyman meadow at Walden. *Utricularia vulgaris* out there. The water colored or dusted with the pollen of the pitch pine.

As I was wading in this Wyman meadow, looking for bullfrog-spawn, I saw a hole at the bottom, where it was six or eight inches deep, by the side of a mass of mud and weeds which rose just to the surface three or four feet from the shore. It was about five inches in diameter, with some sand at the mouth, just like a musquash's hole. As I stood there within two feet, a pout put her head out, as if to see who was there, and directly came forth and disappeared under the target-weed; but as I stood perfectly still, waiting for the water which I had disturbed to settle about the hole, she circled round and round several times between me and the hole, cautiously, stealthily approaching the entrance but as often withdrawing, and at last mustered courage to enter it. I then noticed another similar hole in the same mass, two or three feet from this. I thrust my arm into the first, running it in and downward about fifteen inches. It was a little more than a foot long and enlarged somewhat at the end, the bottom, also, being about a foot beneath the surface, — for it slanted downward, — but I felt nothing within; I only felt a pretty regular and rounded apartment with firm walls of weedy or fibrous mud. I then thrust my arm into the other hole, which was longer and deeper, but at first discovered nothing; but, trying again, I found that I had not reached the end, for it turned a little and descended more than I supposed. Here I felt a similar apartment or enlarge-

ment, some six inches in diameter horizontally but not quite so high nor nearly so wide at its throat. Here, to my surprise, I felt something soft, like a gelatinous mass of spawn, but, feeling a little further, felt the horns of a pout. I deliberately took hold of her by the head and lifted her out of the hole and the water, having run my arm in two thirds its length. She offered not the slightest resistance from first to last, even when I held her out of water before my face, and only darted away suddenly when I dropped her in the water. The entrance to her apartment was so narrow that she could hardly have escaped if I had tried to prevent her. Putting in my arm again, I felt, under where she had been, a flattish mass of ova, several inches in diameter, resting on the mud, and took out some. Feeling again in the first hole, I found as much more there. Though I had been stepping round and over the second nest for several minutes, I had not scared the pout. The ova of the first nest already contained white wiggling young. I saw no motion in the others. The ova in each case were dull-yellowish and the size of small buckshot. These nests did not communicate with each other and had no other outlet.

Pouts, then, make their nests in shallow mud-holes or bays, in masses of weedy mud, or probably in the muddy bank; and the old pout hovers over the spawn or keeps guard at the entrance. Where do the Walden pouts breed when they have not access to this meadow? The first pout, whose eggs were most developed, was the largest and had some slight wounds on the back. The

other may have been the male in the act of fertilizing the ova.[1]

I sit in my boat in the twilight by the edge of the river. Toads are now in full blast along the river. Some sit quite out at the edge of the pads, and hold up their heads so high when they ring, and make such a large bubble, that they look as if they would tumble over backward. Bullfrogs now are in full blast. I do not hear other frogs; their notes are probably drowned. I perceive that this generally is the rhythm of the bullfrog: *er* | *er-r* | *er-r-r* | (growing fuller and fuller and more tremendous) and then doubling, *er, er* | *er, err* | *er, er, er* | *er, er, er* | and finally *er, er, er, er* | *er, er, er, er.* Or I might write it *oorar* | *oorar* | *oorar* | *oorar-hah* | *oorar-hah hah* | *oorar hah hah hah.* Some of these great males are yellow or quite yellowish over the whole back. Are not the females oftenest white-throated? What lungs, what health, what terrenity (if not serenity) it suggests! At length I hear the faint stertoration of a *Rana palustris* (if not *halecina*). Seeing a large head, with its prominent eyes, projecting above the middle of the river, I found it was a bullfrog coming across. It swam under water a rod or two, and then came up to see where it was, or its way. It is thus they cross when sounds or sights attract them to more desirable shores. Probably they prefer the night for such excursions, for fear of large pickerel, etc. I thought its throat was not yellow nor baggy. Was it not the female attracted by the note of the male?

Fireflies pretty numerous over the river, though we

[1] The ova in jar had mostly turned quite white and dead on the 8th; perhaps could not bear the light.

have had no thunder-showers of late. Mosquitoes quite troublesome here.

The ledum is a very good plant to bloom in a pitcher, lasting a week or more.

June 8. P. M. — To marsh hawk's nest near Hubbard's Bath.

I see many breams' nests made, and in one or two in which I look, I find, on taking out the stones and the gravel, the small yellowish ova about one twentieth of an inch in diameter. This is not, at least ordinarily, visible now as you look down on the nest, but, on taking up portions of the bottom of the concave nest, you find it scattered (not crowded) over the sand, stones, clam-shells, weeds, etc., which form the bottom of the nest. It studs the little gray and brown stones, rather scatteredly, like some kind of gem adhering pretty firmly, and the bream is steadily poised over her treasures. You see the bream poised over her large concave nest in the sand, and, taking up a part of the bottom, as some brown stone, you find it studded with the small gem-like ova, loosely dispersed. Apparently it has not been laid long.

The *Salix nigra* is still in bloom. I see red-wing blackbirds hatched. In several places I see where dead suckers have been at last partly devoured by some animal, and their great bladders are seen floating off.

Thomas Bell, in his "British Reptiles," says of "the *Terrapene Europæa*, the common lacustrine tortoise of the Continent," "As they live principally upon small fish, the air-bags of which they reject, it is said that the people are wont to judge of the quantity of tortoises to

be found in a lake or pond, by the number of air-bags which are seen swimming on the surface of the water."

The marsh hawk's eggs are not yet hatched. She rises when I get within a rod and utters that peculiar cackling or scolding note, much like, but distinct from, that of the pigeon woodpecker. She keeps circling over the nest and repeatedly stoops within a rod of my head in an angry manner. She is not so large as a hen-hawk, and is much more slender. She will come sailing swiftly and low over the tops of the trees and bushes, etc., and then stoop as near to my head as she dares, in order to scare me away. The primaries, of which I count but five, are very long and loose, or distant, like fingers with which she takes hold of the air, and form a very distinct part of the wing, making an angle with the rest. Yet they are not broad and give to the wing a long and slender appearance. The legs are stretched straight back under the tail. I see nothing of the male, nor did I before. A red-wing and a kingbird are soon in pursuit of the hawk, which proves, I think, that she meddles with their nests or themselves. She circles over me, scolding, as far as the edge of the wood, or fifteen rods.

The early potentilla is now in some places erect. The sidesaddle-flower is out, — how long? — and the sweet flag, how long?

I see quite common, on the surface in deep water wherever there are weeds, *misty white strings* of spawn, reminding one of toad-spawn without the ova, only whiter, or more opaque. But these strings turn on themselves, forming small masses four to eight inches long, attached to the weeds, — *Ranunculus Purshii*, potamo-

geton, etc., etc. These strings are full of minute ova, like seeds, pale-brown, oval or elliptical, about one fiftieth of an inch long.

I perceive distinctly to-day that there is no articular line along the sides of the back of the bullfrog, but that there is one along the back of that bullfrog-like, smaller, widely dispersed and early frog so common about fountains, brooks, ditches, and the river, of which I probably have one small one bottled and have heard the croak (*vide* April 5th, 1858). That pale-brown or oat spawn must belong, then, I think, to the *Rana fontinalis*.

A kingbird's nest with three eggs, lined with some hair, in a fork — or against upright part — of a willow, just above near stone bridge. Is that small spiked rush from a few inches to a foot or more in height *Eleocharis palustris?* or *tenuis?* In early aster meadow and elsewhere common, along meadow-paths. Whiteweed is getting to be common.

June 9. P. M. — To Beck Stow's.

High blackberry, not long. I notice by the roadside at Moore's Swamp the very common *Juncus effusus*, not quite out, one to two and a half feet high. See a yellow spotted turtle digging her hole at 5 P. M., in a pasture near Beck Stow's, some dozen rods off. It is made under one side like the *picta's*.

Potamogetons begin to prevail in the river and to catch my oar. The river is weedy. White maple keys are abundantly floating.

June 10. *Smilacina racemosa* well out, how long?

Sophia has received the whorled arethusa from Northampton to-day.

P. M. — To Assabet Bath and return by stone bridge.

A Maryland yellow-throat's nest near apple tree by the low path beyond the pear tree. Saw a bird flit away low and stealthily through the birches, and [it] was soon invisible. Did not discover the nest till after a long search. Perfectly concealed under the loose withered grass at the base of a clump of birches, with no apparent entrance. The usual small deep nest (but not raised up) of dry leaves, fine grass stubble, and lined with a little hair. Four eggs, white, with brown spots, chiefly at larger end, and some small black specks or scratches. The bird flits out very low and swiftly and does not show herself, so that it is hard to find the nest or to identify the bird.

See a painted turtle digging her nest in the road at 5.45 P. M.

At the west bank, by the bathing-place, I see that several turtles' holes have already been opened and the eggs destroyed by the skunk or other animal. Some of them — I judge by the size of the egg — are *Emys insculpta's* eggs. (I saw several of them digging here on the 6th.) Among the shells at one hole I find one minute egg left unbroken. It is not only very small, but broad in proportion to length. *Vide* collection. One *E. insculpta* is digging there about 7 P. M. Another great place for the last-named turtle to lay her eggs is that rye-field of Abel Hosmer's just north of the stone bridge, and also the neighboring pitch pine wood. I saw them here on the 6th, and also I do this afternoon, in various

parts of the field and in the rye, and two or three crawling up the very steep sand-bank there, some eighteen feet high, steeper than sand will lie, — for this keeps caving. They must often roll to the bottom again. Apparently the *E. insculpta* are in the very midst of their laying now. As we entered the north end of this rye-field, I saw what I took to be a hawk fly up from the south end, though it may have been a crow. It was soon pursued by small birds. When I got there I found an *E. insculpta* on its back with its head and feet drawn in and motionless, and what looked like the track of a crow on the sand. Undoubtedly the bird which I saw had been pecking at it, and perhaps they get many of the eggs.[1]

Common blue flag, how long?

June 11. P. M. — To Assabet Bath.

The fertile *Salix alba* is conspicuous now at a distance, in fruit, being yellowish and drooping. Hear the parti-colored warbler. Examine the stone-heaps. One is now a foot above water and quite sharp. They contain, apparently freshly piled up, from a wheelbarrow to a cartload of stones; but I can find no ova in them. I see a musquash dive head foremost (as he is swimming) in the usual way, being scared by me, but without making any noise.

Saw a painted turtle on the gravelly bank just south of the bath-place, west side, and suspected that she had just laid (it was mid-afternoon). So, examining the ground, I found the surface covered with loose lichens,

[1] *Vide* June 11th, 1860.

etc., about one foot behind her, and digging, found five eggs just laid one and a half or two inches deep, under one side. It is remarkable how firmly they are packed in the soil, rather hard to extract, though but just buried. I notice that turtles which have just commenced digging will void considerable water when you take them up. This they appear to have carried up to wet the ground with.

Saw half a dozen *Emys insculpta* preparing to dig now at mid-afternoon, and one or two had begun at the most gravelly spot there; but they would not proceed while I watched, though I waited nearly half an hour, but either rested perfectly still with heads drawn partly in, or, when a little further off, stood warily looking about with their necks stretched out, turning their dark and anxious-looking heads about. It seems a very earnest and pressing business they are upon. They have but a short season to do it in, and they run many risks.

Having succeeded in finding the *E. picta's* eggs, I thought I would look for the *E. insculpta's* at Abel Hosmer's rye-field. So, looking carefully to see where the ground had been recently disturbed, I dug with my hand and could directly feel the passage to the eggs, and so discovered two or three nests with their large and long eggs, — five eggs in one of them. It seems, then, that if you look carefully soon after the eggs are laid in such a place, you can find the nests, though rain or even a dewy night might conceal the spot. I saw half a dozen *E. insculpta* digging at mid-afternoon.

Near a wall thereabouts, saw a little woodchuck,

about a third grown, resting still on the grass within a rod of me, as gray as the oldest are, but it soon ran into the wall.

Edward Hoar has seen the triosteum out, and *Euphorbia Cyparissias* (how long?), and a *Raphanus Raphanistrum*, the last at Waltham; also *Eriophorum polystachyon*.

June 12. Rains all day. Much water falls.

June 13. Louring all day.

P. M. — To Ledum Swamp.

Lambkill, maybe one day. Strawberries. In the great apple tree front of the Miles house I hear young pigeon woodpeckers.

The ledum is apparently past prime. The *Kalmia glauca* and the *Andromeda Polifolia* are done, the kalmia just done. The ledum has grown three or four inches (as well as the andromeda). It has a rather agreeable fragrance, between turpentine and strawberries. It is rather strong and penetrating, and sometimes reminds me of the peculiar scent of a bee. The young leaves, bruised and touched to the nose, even make it smart. It is the young and expanding ledum leaves which are so fragrant. There is a yellow fungus common on its leaves, and a black one on the andromeda. The *Vaccinium Oxycoccus* grows here and is abundantly out; some days certainly. I hear and see the parti-colored warbler, blue yellow-backed, here on the spruce trees. It probably breeds here. Also, within three feet of the edge of the pond-hole, where

I can hardly stand in india-rubber shoes without the water flowing over them, a large ant-hill swarming with ants, — though not on the surface because of the mizzling rain. One of the prevailing front-rank plants here, standing in the sphagnum and water, is the elodea.

I see a song sparrow's nest here in a little spruce just by the mouth of the ditch. It rests on the thick branches fifteen inches from the ground, firmly made of coarse sedge without, lined with finer, and then a little hair, small within, — a very thick, firm, and portable nest, an inverted cone; — four eggs. They build them in a peculiar manner in these sphagnous swamps, elevated apparently on account of water and of different materials. Some of the eggs have quite a blue ground.

Go to Conantum end. The *Rubus frondosus* will not bloom apparently for a day or two, though the *villosus* is apparently in prime there. I hear the peculiar notes of young bluebirds that have flown. *Arenaria lateriflora*, how long?

The *Scheuchzeria palustris*, now in flower and going to seed, grows at Ledum Pool, as at Gowing's Swamp. See now in meadows, for the most part going to seed, *Carex scoparia*, with its string of oval beads; and *C. lupulina*,[1] with its inflated perigynia; also what I take to be *C. stipata*, with a dense, coarse, somewhat sharp triangular mass of spikelets; also *C. stellulata*, with a string of little star-like burs. The delicate, pendulous, slender-peduncled *C. debilis*.

Catbirds hatched.

[1] [Two interrogation-points in pencil here.]

June 14. Miss Pratt brings me the fertile barberry from northeast the great yellow birch. The staminate is apparently effete. Young partridges, when?

P. M. — To Gowing's Swamp.

I notice interrupted ferns, which were killed, fruit and all, by the frosts of the 28th and 29th of May, now coming up afresh from the root. The barren fronds seem to have stood it better.

See in a meadow a song sparrow's nest with three eggs, and another egg just buried level with the bottom of the nest. Probably it is one of a previous laying, which the bird considered addled. I find it to be not at all developed, nor yet spoiled.

Common garden columbine, broad and purple, by roadside, fifty rods below James Wright's.

The river is raised surprisingly by the rain of the 12th. The Mill Brook has been over the Turnpike.

June 15. Rains steadily again, and we have had no clear weather since the 11th. The river is remarkably high, far higher than before, this year, and is rising. I can paddle into and all about the willowy meadow southwest of Island. I had, indeed, anticipated this on account of the remarkable lowness of the river in the spring.

That coarse grass in the Island meadow which grows in full circles, as on the Great Meadows, is wool-grass, though but little blooms. Some is now fairly in bloom and it has the dark bracts of what I observed on the Great Meadows. The peculiarly circular form of the patches, sometimes their projecting edges being the

arcs of circles, is very obvious now that the lower and different grass around is under water. Many plants have a similar habit of growth. The *Osmunda regalis*, growing in very handsome hollow circles, or sometimes only crescents or arcs of circles, is now generally a peculiarly tender green, — its delicate fronds, — but some has begun to go to seed and look brown. Hollow circles, one or two feet to a rod in diameter. These two are more obvious when, as now, all the rest of the meadow is covered with water. That large grass, five feet high, of the river brink is now just begun. Can it be blue-joint, or *Calamagrostis Canadensis*?[1]

June 16. P. M. — To Staples's Meadow Wood.

It is pleasant to paddle over the meadows now, at this time of flood, and look down on the various meadow plants, for you can see more distinctly quite to the bottom than ever. A few sedges are very common and prominent, one, the tallest and earliest, now gone and going to seed, which I do not make out, also the *Carex scoparia* and the *C. stellulata*. How will the water affect these plants, standing thus long over them? The head of every sedge that now rises above the surface is swarming with insects which have taken refuge from the flood on it, — beetles, grasshoppers, spiders, caterpillars, etc. How many must have been destroyed! No doubt thousands of birds' nests have been destroyed by the flood, — blackbirds', bobolinks', song sparrows', etc. I see a robin's nest high above the water with the young just dead and the old bird in the water,

[1] Probably phalaris.

apparently killed by the abundance of rain, and afterward I see a fresh song sparrow's nest which has been flooded and destroyed. Two sternothærus which I smell of have no scent to-day.

Looking into Hubbard's Pool, I at length see one of the minims which I put into it. I brought the last here April 30th. It is now a little perch about an inch and a quarter long; it was then about a quarter of an inch long. I can now see the transverse bars a rod off. It is swimming actively round and round the pool, but avoids the quite shallow water of the edges, so it does not get landlocked or lost in the weedy overflowed edges. I put twenty or thirty into this pool in all. They grow very fast, then, at last.

Carrion-flower, how long? Not long. How agreeable and wholesome the fragrance of the low blackberry blossom, reminding me of all the rosaceous fruit-bearing plants, so near and dear to our humanity! It is one of the most deliciously fragrant flowers, reminding of wholesome fruits.

I see a yellow-spotted turtle digging its hole at mid-afternoon, but, like the last of this species I saw, it changed its place after I saw it, and I did not get an egg; it is so wary. Some turtles must lay in pretty low fields, or else make a much longer excursion than I think they do, the water in which they dwell is so far from high land.

Among the geraniums which now spot the wood or sprout-land paths, I see some with very broad, short, rounded petals, making a smaller but full round flower.

The *Salix nigra* appears to be quite done.

Edward Emerson, Edward Bartlett, and Storrow Higginson come to ask me the names of some eggs to-night. They have the egg of the warbling vireo,[1] — much like the pepe's, but smaller. They tell of a hen-hawk's nest seen the 6th, with two eggs. They have also, undoubtedly, the egg of the purple finch, seen first two or three weeks ago, and they bring me two nests and one egg. Both these nests were in small fir trees, one by the Lee house (that was), Joe Barrett's, and the other in the New Burying-Ground. The last appeared to have been spoiled by the rain and was against the main stem and contained four fresh eggs, they say, the 14th; the other had five eggs two days earlier; both near the top. The egg is a little more than three quarters of an inch long by nearly five eighths at the bigger end, and so of another from the other nest, rather more slender, — a tapering pale bluish-green egg, with blackish-brown and also dull slate-colored spots and streaks about the larger end and a few very fine spots on the other parts. The Lee nest is somewhat like a hair-bird's, though larger. They are both about four inches wide, outside to outside, and two and a half high, two and a quarter to two and a half [in] diameter within, and one and a quarter to one and a half deep. The Lee house one (which had the egg in it) is composed externally of many small weed stems — apparently lepidium, lechea — and root-fibres, and the inner part is very thick and substantial, of root-fibres and bark-shreds and a little

[1] Or is it not yellow-throated vireo's? *Vide* nest. From a maple near Hemlocks, Assabet.

cow's hair, lined with much horsehair. The other is a little less substantial, externally of pinweed and apparently hypericum stems and root-fibres and within of root-fibres lined with much fine and soft bark-shreds.

Edward Bartlett brings me a crow's nest, one of several which he found in maple trees, twenty or thirty feet from ground, in a swamp near Copan, and in this he found an addled egg. The mass of twigs which was its foundation were too loose and bulky to be brought away, — half a wheelbarrow-load, at least, chiefly maple, eighteen inches long and a quarter of an inch wide. The rest or inner portion of the nest, which part is ten or twelve inches in diameter, about two inches thick, and slightly concave, is composed almost wholly of coarse strips of grape-vine bark, with some finer, apparently maple, bark-shreds and some hair and hog's bristles, perhaps of carrion carried to its young heretofore; and the under part is loosely earthy to some extent.

June 17. P. M. — To hawk's nest.

One egg is hatched since the 8th, and the young bird, all down, with a tinge of fawn or cinnamon, lies motionless on its breast with its head down and is already about four inches long! An hour or two after, I see the old hawk pursue a stake-driver which was flying over this spot, darting down at him and driving him off.

The stake-driver comes beating along, like a long, ungainly craft, or a revenue cutter, looking into the harbors, and if it finds a fisherman there, standing out again.

See a painted turtle digging at mid-afternoon. I have only to look at dry fields or banks near water to find the turtles laying there afternoons.

June 18. How dogs will resort to carrion, a dead cow or horse, half buried, no matter how stale, — the best-bred and petted village dogs, and there gorge themselves with the most disgusting offal by the hour, as if it were a season of famine! Surely they are foul creatures that we make cossets of.

P. M. — To Walden to see a bird's nest, a red-eye's, in a small white pine; nest not so high as my head; still laying. A boy climbs to the cat owl's nest and casts down what is left of it, — a few short sticks and some earthy almost turfy foundation, as if it were the accumulation of years. Beside much black and white skunk-hair, there are many fishes' scales (!) intimately mixed with its substance, and some skunk's bones.

E. Bartlett has found three bobolinks' nests. One or more of them he thinks has been covered by the recent flood. A little boy brings me an egg of Wilson's thrush, which he found in a nest in a low bush about a foot from the ground.

Coming across the level pasture west of E. Hubbard's swamp, toward Emerson's, I find a young *Emys insculpta*, apparently going to lay, though she had not dug a hole. It was four and a quarter inches long by three and a half wide, and altogether the handsomest turtle of this species, if not of any, that I have ever seen. It was quite fresh and perfect, without wound or imperfection; its claws quite sharp and slender, and the

annual striæ so distinct on all the scales above and below that I could count them with ease. It was nine years old, though it would be like an infant among turtles, the successive striæ being perfectly parallel at equal distances apart. The sternum, with a large black spot on the rear angle of each scale and elsewhere a rich brown color, even reminded me of the turtle-shell of commerce. While its upper shell was of a uniform wholesome brown, very prettily marked indeed, not only by the outlines of the scales, but more distinctly by the lines of prominences raying out from the starting-point of each scale, perfectly preserved in each year's growth, a most elaborate coat of mail, worthy the lifelong labor of some reptilian Vulcan. This must have been a belle among the *E. insculpta*. Nevertheless I did discover that all the claws but one of one hind foot were gone! Had not a bird pecked them off? So liable are they to injury in their long lives. Then they are so well-behaved; can be taken up and brought home in your pocket, and make no unseemly efforts to escape. The upper shell was remarkably spreading and curving upward on the rear edges.

June 19. *Saturday*. I do not hear the night-warbler so often as a few weeks ago. Birds generally do not sing so tumultuously.

Storrow Higginson and other boys have found this forenoon at Flint's Pond one or more veery-nests on the ground. Also showed me one of five eggs, far advanced, they found there in a nest some fourteen feet high in a slender maple sapling, placed between many

upright shoots, many dry leaves outside. It is a slender clear-blue egg, more slender and pointed at the small end than the robin's, and he says the bird was thrush-like with a pencilled breast. It is probably the wood thrush.[1] He saw one or two other similar nests, he thought, not yet completed. Also showed me an egg, which answers to the description of the tanager's. Two fresh eggs in small white oak sapling, some fourteen feet from ground.[2] They saw a tanager near.[3]

P. M. — To Bateman's Pond.

The swamp-pink, apparently not long, and the maple-leaved viburnum, a little longer, but quite early. Some of the calla is going to seed.

See an oven-bird's nest with two eggs and one young one just hatched. The bird flits out low, and is, I think, the same kind that I saw flit along the ground and trail her wings to lead me off day before yesterday.

June 20. P. M. — By boat to Holden Swamp.

I heard that snapping sound against a pad on the surface, and at the same time saw a pad knocked up several inches, and a ripple in the water there as when a pickerel darts away. I should say without doubt some fish had darted there against the pad, perhaps at an insect on the under side.

Got the marsh hawk's egg, which was addled. I

[1] Saw it the 23d, and it is apparently this bird. It is some ten rods south along path beyond the clearing, opposite a stone turned over. *Vide* 23d. *Vide* July 31st.

[2] Similarly placed to the hermit (?) thrush's of three pages forward.

[3] I have one egg. *Vide* 23d.

noticed on the 17th that the hawk (my marsh hawk) was off her nest and soaring above the wood late in the afternoon, as I was returning.

I notice that when turtles are floating dead their necks and legs are stretched out. I have seen them this year of every kind but the *meleagris* and cistudo, including a snapping turtle with shell some nine inches long, floating or lying dead. What kills them?

I wade about Holden Swamp, looking for birds' nests. The spruce there are too thin-foliaged for nests, though I hear a pepe expressing anxiety, and also song sparrows. See the redstart and hear many; also *hear* the blue yellow-backs.

Walking in the white pine wood there, I find that my shoes and, indeed, my hat are covered with the greenish-yellow pollen of the white pines, which is now being shed abundantly and covers like a fine meal all the plants and shrubs of the forest floor. I never noticed it in such abundance before. My shoes are green-yellow, or yellow-green, even the next day with it.

Dangle-berry well out, how long? *Potentilla Norvegica*, how long? What is that sedge with a long *beak*, some time out of bloom, now two feet high, common just north of new stone bridge? *Vide* pressed one.

I see that the French have a convenient word, *aunaie*, also spelt *aulnaie* and *aulnage*, etc., signifying a grove of alders. It reminds me of their other convenient word used by Rasle, *cabanage*.

June 21. *Vide* at Cambridge, apparently in prime, *Silene inflata;* also, in a rich grass-field on Sacramento

Street, what may be *Turritis glabra* (?), also in prime, the last three or four feet high. Both pressed.

Talked with Mr. Bryant at the Natural History Rooms. He agrees with Kneeland in thinking that what I call the myrtle-bird's is the white-throat sparrow's note. Bryant killed one Down East in summer of '56. He has lived the last fifteen years at Cohasset, and also knows the birds of Cambridge, but talks of several birds as rare which are common in Concord, such as the stake-driver, marsh hawk (have neither of their eggs in the collection), Savannah sparrow, the *passerina* much rarer, and I think purple finch, etc. Never heard the *tea-lee* note of myrtle-bird (?) in this State. Their large hawk is the red-shouldered, not hen-hawk. He thinks that the sheldrake of the Maine lakes is the *merganser*, the *serrator* belonging rather to the sea-coast. Of the two little dippers or grebes, he thought the white-breasted one would be the commonest, which has also a slender bill, while the other has a brownish breast and a much thicker bill.

The egg of the *Turdus solitarius* in the collection is longer, but marked very much like the tanager's, only paler-brown. They have also the egg of the *T. brunneus*, the other hermit thrush, not common here.

June 22. Edward Bartlett found what he calls two bobolinks' nests some weeks ago, with each six eggs. I have one of the nests. There is but little of it, composed simply of some flexible grass without and finer within, kept in form by the thick tussock or tuft of meadow-grass at the bottom and in the midst of which it is placed.

He shows me, also, one of three eggs found the 20th in Gourgas's wood-lot, within a rod of the roadside, in a small slender oak (eighteen feet high), about fourteen feet from the ground, about fifteen rods north of Britton's corner, in a grove, where two or three small branches left the main stem; eggs somewhat advanced. Says the bird was a thrush of some kind. The egg is one inch by five eighths, rather slender, faint-blue, and quite generally spotted with distinct rather reddish brown, inclining to small streaky blotches, though especially at the larger end; not *pale*-brown like that described [on the preceding] page. Can it be the *Turdus solitarius*?[1]

Mowing the June grass about our house a few days ago, I disturbed several toads squatted deep in the rankest grass near the house, and wounded one or two with the scythe. They appear to love such cool and shady retreats by day, hopping out at night and in the rain.

I see in the river a little pickerel, not quite two inches long, which must have been hatched this year, and probably as early as the perch, since they have more to grow.

I notice, after tipping the water out of my boat under the willows, much evidently pine pollen adhering to the inside of the boat along the water-line. Did it fall into it during my excursion to Holden's Swamp the 20th, or has it floated through the air thus far?[2]

[1] I have the egg. *Vide* Dec. 7th, 1858. *Vide* my note to Wilson's hermit thrush.

[2] *Vide* June 21st, 1860.

About the grassy island in front of the Rock, grows abundantly, apparently the *Carex crinita*, with about four long pendulous fertile spikes and one barren, two and a half feet high and long since done. I think that I first noticed willow down floating on the river about the 16th.

Observe a painted turtle laying or digging at 5 P. M. She has not excavated any hole, but has already watered the ground, and, as usual when I take her up under these circumstances, passes more water.

June 23. P. M. — With some boys to Flint's Pond, to see the nests mentioned on last [two pages]. The hermit (?) thrush's nest referred to on last page is a rather shallow nest of loose construction, though sufficiently thick-bottomed, about five inches in diameter and hardly one deep within, externally of rather coarse and loosely arranged stubble, chiefly everlasting stems with the flowers yet emitting some fragrance, some whorled loosestrife with the seed-vessels, etc., etc.; within, finer grass and pine-needles. Yet the grass is as often bent angularly as curved regularly to form the nest.

The tanager's nest of the 19th is four and a half to five inches wide and an inch or more deep, considerably open to look through; the outside, of many very slender twigs, apparently of hemlock, some umbelled pyrola with seed-vessels, everlasting, etc.; within, quite round and regular, of very slender or fine stems, apparently pinweed or the like, and pine-needles; hardly any grass stubble about it. The egg

is a regular oval nine tenths of an inch long by twenty-seven fortieths, pale-blue, sprinkled with purplish-brown spots, thickest on the larger end. To-day there are three rather fresh eggs in this nest. Neither going nor returning do we see anything of the tanager, and conclude it to be deserted, but perhaps she stays away from it long.

That rather low wood along the path which runs parallel with the shore of Flint's Pond, behind the rock, is evidently a favorite place for veery-nests. I have seen three there. One lately emptied I got to-day, amid the dry leaves by some withered ferns. It is composed externally of a mass of much withered oak leaves, thick and pretty well stuck together, plastered or stuck down over the rim, is five to six inches in diameter and four high, two and a half wide within, and very deep, more than two inches. Next to the leaves come bark-shreds, apparently maple bark, and the lining is of a little fine grass, pine-needles, apparently a little hypnum root-fibre. A very deep well-shaped and rounded cavity. Saw another with two eggs in it, one a much lighter blue than the other. This was by the path leading toward the rock, amid some sprouts at the base of a sapling oak, elevated about six inches above the general level (the veery's). It was a deep, firm nest three quarters of an inch thick, outwardly oak and chestnut leaves, then rather coarse bark-shreds, maple or oak, lined with the same and a few dark root-fibres.

What that empty nest partly of mud, with conspicuous saliva, on a middle-sized maple, against main stem, near wood thrush's?

In the case of the hermit (?) thrush, wood thrush, and tanager's, each about fourteen feet high in slender saplings, you had to climb an adjacent tree in order to reach them.

A male redstart seen, and often heard. What a little fellow!

Lysimachia quadrifolia, how long? and veiny-leaved hawkweed, how long? Get an egg out of a deserted bank swallow's nest, in a bank only about four feet high dug in the spring for a bank wall near Everett's. The nest is flattish and lined abundantly with the small, somewhat downy, naturally curved feathers of poultry. Egg pure white, long, oval, twenty-seven fortieths by eighteen fortieths of an inch.

Take two eggs out of the oviduct of an *E. insculpta*, just run over in the road.

They have lately cooked a snapping turtle at Mrs. Wetherbee's, eggs and all, and she thinks there were just forty-two of them!

June 24. Very hot weather.

Aralia hispida at Cliffs. Epilobium, how long?

Storrow Higginson gives me a bobolink's egg. It is a regular oval, seven eighths by five eighths inch. It is a dark cream-color with pretty large spots of brown, sometimes blackish, chiefly at the large end, and very faint, more internal pale-purplish spots equally dispersed.

June 25. P. M. — To Conantum.

Hotter than yesterday and, like it, muggy or close.

So hazy can see no mountains. In many spots in the road and by edge of rye-fields the reflected heat is almost suffocating. 93° at 1 P. M.

At my perch pool I hear the pebbly sound of frogs, and some, perhaps below the middle size, hop in before I see them. I suspect that this sound is not made by the bullfrog, but by the *fontinalis* or *palustris*.

In the meadow or partly included in the west end of Hubbard's Grove, a smooth, rather flaccid rush with roundish spikes, say twenty inches high, apparently fresh, somewhat *flava*-like.

Sitting on the Conantum house sill (still left), I see two and perhaps three young striped squirrels, two-thirds grown, within fifteen or twenty feet, one or more on the wall and another on the ground. Their tails are rather imperfect, as their bodies. They are running about, yet rather feebly, nibbling the grass, etc., or sitting upright, looking very cunning. The broad white line above and below the eye make it look very long as well as large, and the black and white stripes on its sides, curved as it sits, are very conspicuous and pretty. Who striped the squirrel's side? Several times I saw two approach each other and playfully and, as it were, affectionately put their paws and noses to each other's faces. Yet this was done very deliberately and affectionately. There was no rudeness nor excessive activity in their sport. At length the old one appears, larger and much more bluish, and shy, and, with a sharp cluck or chip, calls the others gradually to her and draws them off along the wall, they from time to time frisking ahead of her, then she ahead of

them. The hawks must get many of these inexperienced creatures.

The *Rubus frondosus* is hardly past prime, while the *villosus* is almost wholly done here. Just south the wall at Bittern Cliff, the *Panicum latifolium*, hardly yet, with some leaves almost an inch and a half wide.

We bathe at Bittern Cliff. The water is exceedingly warm near the surface, but refreshingly cold four or five feet beneath. There must be twenty degrees difference at least.[1] The ground under the white pines is now strewn with the effete flowers, like an excrement.[2] I notice an apparent female bullfrog, with a lustrous greenish (not yellow) throat.

June 27. Sunday. P. M. — Up Assabet.

Land at old mill-site and walk through the Lee Woods looking for birds' nests. See an *Attacus luna* in the shady path, smaller than I have seen before. At first it appears unable or unwilling to fly, but at length it flutters along and upward two or three rods into an oak tree, and there hangs inconspicuous amid the leaves.

Find two wood pewees' nests, made like the one I have. One on a dead horizontal limb of a small oak, fourteen feet from ground, just on a horizontal fork and looking as old as the limb, color of the branch, three eggs far advanced. The other, with two eggs, was in a similar position exactly over a fork, but on a living branch of a slender white oak, eighteen feet

[1] [Queried in the margin.]

[2] Also July 4th, 1860, turned reddish, as the pitch pine earlier.

from ground; lichens without, then pine-needles, lined with usnea, willow down. Both nests three to five feet from main stem.

June 28. P. M. — To broom.

The erect potentilla is a distinct variety, with differently formed leaves as well as different time of flowering, and not the same plant at a different season. Have I treated it as such?

The *Genista tinctoria* has been open apparently a week. It has a pretty and lively effect, reminding me for some reason of the poverty-grass. Mountain laurel on east side of the rocky Boulder Field wood is apparently in prime.

I see in many places little barberry bushes just come up densely in the cow-dung, like young apple trees, the berries having been eaten by the cows. Here they find manure and an open space for the first year at least, when they are not choked by grass or weeds. In this way, evidently, many of these clumps of barberries are commenced.

I notice that the ostrya, when growing in woods, has a remarkable spread for the size of its trunk, more than any tree, methinks.

Cymbidium, how long? *Epilobium coloratum*, how long? We find in the Botrychium Swamp fine wiry asparagus plants, six inches high, with the seeds at bottom, apparently planted by birds, but no plants two years old. There are fertile bayberry bushes fifteen rods east of yellow birch and six south of apple tree.

June 29. P.·M. — To Walden.

Bathing in the cove by railroad. When I hold my head near the surface and look down, in two or three feet of water, the bottom appears concave, just as the sky does. How interesting the water-target's slender gelatinous stem and leaves, reminding me of the plants in aquaria!

END OF VOLUME X

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